JOB FUTURES

AN OCCUPATIONAL OUTLOOK FOR THE '90s

QUEBEC

JOB FUTURES - QUEBEC
AN OCCUPATIONAL OUTLOOK FOR THE 1990s
QUEBEC

VOLUME I:
FIELDS OF STUDY
2nd Edition

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PREFACE

Technological progress greatly affects both the way in which the duties and skills associated with various occupations are modified and the nature and volume of the labour demand. The acceleration of technological change over the past few years has made it more difficult for individuals to choose from among all the different career opportunities available to them. Moreover, these changes have brought to the fore the adaptation problems faced by a labour force with outdated skills and has given rise to more pressing concerns on the part of companies about human resources planning.

In order to respond to the growing need for information on the anticipated employment growth in the various occupations, the Strategic Planning Branch of EIC - Quebec is pleased to present the second edition of *Job Futures - Quebec*.

This publication comprises two volumes. The first presents statistics on school graduates and describes their situation on the labour market, particularly with respect to placement rate, type of job, salary, and medium- and long-term employment outlook.

Unlike the previous version, this edition covers all the vocational training sectors, namely the secondary and college vocational sectors and the three university levels. More than 130 fields of training from these three sectors are analyzed.

The second volume deals with the expected employment growth in the labour market by occupation for the 1990-2000 forecast period and in the labour supply for the same period. Volume II also gives a detailed account of the conditions for practising these occupations, the technological, technical and organizational changes affecting them, complementary training leading to their practice and the skills and aptitudes needed by graduates to compete effectively on the labour market.

It is my hope that you will find this publication a useful source of information that will assist you in your decision-making. Finally, any comments sent to us on the content or format of the document will be taken into account in the next edition.

Jacques Leblanc
Director
Strategic Planning Branch
Employment and Immigration Canada
Quebec Region

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INTRODUCTION

Job Futures - Quebec was designed to meet the needs of people who are seeking ways to enter the labour market and for those who are helping them do so. It is intended primarily for students, those who wish to re-enter the labour market after a long time away from it, those who are interested in redirecting their professional careers, educational and vocational counsellors as well as other people working in the fields of education and labour.

Volume 1

Knowledge of one's own aspirations, tastes and personal abilities is undoubtedly the most reliable criterion for choosing an academic and vocational path that will ensure the best chance of success. Nonetheless, in order to be perfectly balanced, this choice must also be consistent with actual job opportunities and work conditions. In this respect, graduates' recent experience on the labour market is no doubt one of the most important sources of information.

Do graduates in the field of study that interests me pursue more advanced studies after obtaining a first degree? Do they face difficulties entering the labour market? What are the facts on job placement and unemployment? Which occupations do they work in after graduation? To what extent do they work in jobs that are related to their education? What is their average salary? Is the employment outlook over the next few years expected to improve or deteriorate? These are all questions that are likely to interest students who are about to make a choice with respect to their education and career and to which the first volume of *Job Futures - Quebec* attempts to provide answers.

How Volume I is organized

The first volume presents the principal statistics concerning school graduates by placing the emphasis on the market's capacity to provide them with employment. A short-term view of the market situation is provided by the main results of graduate surveys conducted in 1988. The results given concern the respondents' situation on the labour market after graduation, placement rate, type of job and salary. As labour market conditions are constantly changing, medium- and longer-term outlooks have been introduced to describe the employment opportunities that are expected to prevail over the next decade.

The first volume is organized according to groups of disciplines that have been kept as homogeneous as possible while at the same time preserving the significance of the data. Thus, all the vocational training levels of the regular education system are covered by this edition of *Job Futures - Quebec*, namely, the secondary and college vocational sectors and the three university levels (bachelor's, master's and doctoral degrees). A total of 133 fields of training are analyzed, i.e. 32 for the secondary level, 39 for the college level, 43 for the bachelor's level and 19 for the master's and doctoral levels which have been combined to form the higher education sector. In order to facilitate use, the composition of these different fields of study as well as an index by specialty are appended.

How to use Volume I

This volume was designed as a companion to Volume 2 which gives a more detailed picture of the conditions in which the various occupations are practised, the technological, technical and organizational changes affecting them, complementary training leading to their practice and employment outlook. The reader interested in doing so can therefore consult a given field of training in Volume I, study the overall outlook for the field, identify one or more occupations associated with it and then consult Volume II for further information on these occupations. Conversely, the reader may first identify an occupation, trace its growth by consulting Volume II and then examine the employment outlook for graduates in the field of study associated with this occupation.

We also invite the reader to consult the section **CHOOSING THE TYPE OF TRAINING THAT MEETS MY NEEDS**, which draws a general picture of the situation of graduates on the labour market and highlights useful information for finding one's way in the world of education.

Sources of data

Most of the information presented in Volume I is taken from the 1988 *National Graduate Survey* conducted among university graduates and from the 1988 *Relance* surveys conducted by the Department of Education of Quebec among secondary-school and college students. There is one important distinction between these two surveys: the scope of their coverage. The first consists of a follow-up of graduates two years after graduation, and the second group of surveys provides information about the situation of graduates only one year after graduation. As a graduate's situation can change dramatically from one year to the next, any comparisons between these two surveys must take into account this distinction.

Other sources of information have been used in the preparation of the first volume. Thus, the data on past growth in the proportion of graduates by discipline at the college and university levels are taken from an annual catalogue issued by Statistics Canada entitled *Education in Canada* (Catalogue 81-229). The data for the secondary vocational sector are, for their part, estimates made on the basis of the composition of graduates by discipline in the private and public sectors over the past few years. Finally, estimates for the coming decade are taken from the Canadian Occupational Projection System and reflect the demographic trends for the age group corresponding to the level of education concerned.

Definitions

Graduate in the labour market: a graduate who, at the time of the survey, was not studying full time and who was either employed or looking for a job.

Employed graduate: a graduate who, at the time of the survey, was not studying full time and who was employed.

Unemployed graduate: a graduate who, at the time of the survey, was neither studying full time nor employed but who was looking for a job.

Graduate not in the labour market: a graduate who, at the time of the survey, was either studying full time or unemployed and who was not looking for a job.

Graduate in school: a graduate who, at the time of the survey, was studying full time.

Graduate who is neither employed nor in school: a graduate who, at the time of the survey, was not studying full time, was not employed and was not looking for a job.

Participation rate: proportion of all graduates who are in the labour force.

Employment rate: proportion of all graduates who are employed.

Placement rate: proportion of graduates in the labour market who are employed.

Unemployment rate: proportion of all unemployed graduates in the labour market.

Work-education link: This link was established by the graduates themselves. There were three possible answers: direct link, indirect link and no link.

Market growth index: This index is the ratio obtained by dividing the demand in related occupations by the number of graduates. This is a comparative index for which the situation during the 1985-90 period is equivalent to one. This index indicates whether market conditions will tend to deteriorate (smaller than one) or improve (greater than one) for graduates in a given field of study.

Other important sources to consult

Job Futures - Quebec is not the only source of information on career opportunities. We therefore invite the reader to consult other sources that can provide additional information.

We draw the reader's attention to two documents published annually by the Department of Education of Quebec, namely *Relance au secondaire* and *Relance au collégial*, which present the results of these surveys. The Service régional d'admission du Montréal métropolitain (SRAM) also publishes on an annual basis the *Guide pratique des études universitaires au Québec* and the *Guide pratique des études collégiales au Québec*, which warrant careful examination.

For more detailed information on educational requirements, job descriptions or work conditions, readers may consult the Canadian Classification and Dictionary of Occupations (CCDO). Moreover, Employment and Immigration Canada administers the CHOICE program, an interactive computerized system that allows users to ask relevant questions on the careers open to them. More information on CHOICE may be obtained from any Canada Employment Centre.

Finally, a national version of *Job Futures* is also available.

PART I

OVERVIEW

CHOOSING THE TYPE OF TRAINING THAT MEETS MY NEEDS

As noted earlier, accurately identifying one's tastes, aptitudes and interests constitutes the first step in choosing a career. Nonetheless, this choice also requires that the consequences be properly weighed. How long will it take to complete the studies I am undertaking? What will be the employment outlook at the end of my studies? Into which occupational field will these studies lead me? These are all valid questions. The information given in the two volumes of *Job Futures - Quebec* attempt to give precise answers to these questions. But first it would be interesting to shed some light on the overall situation of graduates who have already entered the labour market.

The importance of general education

Data clearly show that education is the best form of employment insurance. Thus, while the average unemployment rate was 9.3% in 1989, it was 14.2% for those who had completed fewer than nine years of schooling, 10.7% for those with between nine and thirteen years of schooling, 7.2% for holders of a Diploma of Collegial Studies and 5.8% for university graduates. Thus, the more years of schooling graduates have, the smaller are their chances of being unemployed.

Over the next decade, factors such as the pressures of international competition which raise the level of excellence sought by employers, technological progress which is eliminating a large number of jobs involving physical strength or repetitive actions and the greater availability of a more educated labour force will create a situation in which a solid general education will more than ever be an indispensable prerequisite for success in the labour market.

The importance of vocational training

Although it significantly raises individuals' ability to adapt to change, a general education does not however guarantee easy access to the labour market. The practice of any occupation requires the acquisition of specific knowledge that can only be obtained through vocational training.

The professional skills needed for practising different occupations may be acquired in a number of ways. Thus, experience will continue to be a very important aspect of vocational training.

Access to positions of responsibility has always been based on recognition of previous achievements. Whether formal or not, on-the-job training will in this sense continue to provide individuals with the principal means of realizing their career aspirations. Thus, a solid general education and the acquisition of specific skills on the job may well constitute important assets for an interesting career.

Nonetheless, job specialization in a world where the technical aspect of tasks is assuming increasing importance means that the requirements for entering the labour market will also tend towards greater specialization. It will become increasingly difficult for candidates to enter the various occupations for the first time without the necessary basic skills. For newcomers on the market, a general education will increasingly have to be backed up with specialized training acquired within the regular education system (private or public). This will set them apart not only from other candidates but will allow them quite simply to enter the occupational field they have chosen.

If general education constitutes excellent long-term employment insurance, vocational training is, for its part, the best means of escaping the vicious circle of "no job because no experience and no experience because no job."

Duration of vocational training

In Quebec, vocational training is available at the secondary, college and university levels. These three levels serve very different clienteles as much from the standpoint of tastes and interests as that of motivation and aptitude with respect to studies.

The secondary vocational sector constitutes the shortest route to the labour market. For this training, students require ten years of general education and between one and three years of vocational training depending on whether they wish to obtain a certificate, a diploma or an Attestation of Vocational Specialization. This type of training usually leads to occupations that require theoretical knowledge but in which operational functions are predominant.

The vocational sector at the college level requires eleven years of general education and three years of vocational training leading to a Diploma of Collegial Studies. The occupations associated with this type of training generally require less manual dexterity but more in-depth theoretical knowledge. Operational functions are still important but, being less related to routine actions, they require better understanding and reasoning abilities.

University training is accessible after thirteen years of general education at the secondary and college levels. A minimum of three years of additional training leads to an undergraduate degree (bachelor's) to which may be added between two and five years of specialization for a graduate degree (master's and doctorate). The occupations associated with this type of training require primarily the ability to use abstract skills to solve concrete problems although manual operational functions may sometimes be important.

Popularity of vocational training

Each year, between 700,000 and 750,000 students are enrolled in regular education in Quebec. A large proportion of these graduates, about 70%, enter general training programs at the secondary and college levels, and between 200,000 and 250,000 young people enter the various vocational education programs. Of this number, nearly half are enrolled in programs at the university level, 30% at the college level and 20% at the secondary level.

During the 1980s, the popularity of vocational education at the secondary level declined dramatically when enrolment in a number of disciplines dropped by more than half. This drop had a positive effect on university enrolment in particular, which rose from an average of 97,000 over the first half of the decade to more than 105,000 as of 1986. The rise in the number of university students is also reflected in statistics for colleges which saw their vocational sector shrink over the same period, declining from an annual enrolment average of 49% to 45% between the first and second half of the 1980s.

TABLE I
GROWTH IN SCHOOL ENROLMENT IN QUEBEC
according to level of education and type of training

	1981-85		1986-90		1991-95		1996-2000	
	No.	%	No.	%	No.	%	No.	%
Secondary	565.1	69.1	467.8	64.1	496.7	67.1	483.6	66.2
General	492.1	60.2	423.4	58.0	451.1	61.0	439.1	60.1
Vocational	73.0	8.9	44.4	6.1	45.6	6.1	44.5	6.1
College	155.6	19.0	155.3	21.3	143.0	19.4	144.2	19.7
General	79.2	9.7	84.6	11.6	78.3	10.6	78.9	10.8
Vocational	76.4	9.3	70.7	9.7	64.7	8.8	65.3	8.9
University	97.0	11.9	106.8	14.6	100.0	13.5	103.4	14.1

Sources: Education in Canada, Statistics Canada, Catalogue 81-229, annual.
Strategic Planning Branch, E.I.C., Quebec Region.

The problem of drop-outs

The rise in university enrolment partly reflects the significant gains recorded by Quebec with respect to the education of its population. Nonetheless, it also denotes a degree of malaise in the vocational education sector. Each year, a large number of young people enter the labour market without having earned a vocational education diploma. Of these, a large number are from the general secondary and college sectors.

According to the Relance Survey conducted by the Department of Education of Quebec, more than 10% of the graduates in the general college sector were not pursuing full-time studies in the year after graduation. It is generally recognized that the drop-out rate is even higher after the first year. In the case of secondary school, the drop-out phenomenon seems to be as serious since about 13% of Secondary V graduates were not continuing their studies in the year after graduation.

Although some graduates take a temporary break from their studies, many of them do not go back to school. Many drop-out because of a poor academic choice that did not take into account the student's motivation and ability to pursue extended studies.

The consequences of dropping out of school are very serious. Placement data for drop-outs are very revealing in this respect. While unemployment was less than 9% for graduates in the college vocational sector, general sector graduates who had tried their luck on the labour market had an unemployment rate of nearly 20%. Moreover, only one out five jobs obtained by graduates in the general sector was linked to education, compared to four out five for their colleagues in the vocational sector. The discrepancies in salary were also very high between these two types of graduates, reaching more than $7,000 one year after graduation.

At the secondary level, the differences between graduates in the vocational and general sectors were slightly less pronounced from the standpoint of placement but were considerable with respect to employment satisfaction (work related to education) and salary. As regards salary, graduates in the vocational sector earned over 20% more compared to graduates in the secondary general sector who were working full time.

TABLE II
STATISTICS ON DROP-OUTS AT THE SECONDARY AND COLLEGE LEVELS
Quebec 1988

Level of education	Participation rate %	Placement rate %	unemployment rate %	Related jobs %	Unrelated jobs %	Average income $
Gen.sec.						
N-grads	55.2	80.9	19.1	8.5	91.5	$11,200
Grads	13.4	81.0	19.0	10.4	89.6	$10,800
Voc.sec.						
N-grads	82.1	69.4	30.6	22.6	77.4	$12,400
Grads	83.9	79.5	20.5	66.0	34.0	$13,300
Sec.gen.						
N-grads	46.2	78.4	21.6	8.1	91.9	$9,700
Grads	11.2	80.7	19.3	19.2	80.8	$9,300
Voc.col.						
N-grads	66.6	80.3	19.7	31.7	68.3	$12,700
Grads	82.3	91.5	8.5	80.9	19.1	$17,700

Source: Relance Survey, Department of Education of Quebec, 1988.

The repercussions of dropping out before obtaining a diploma are equally unfortunate for students, but differ according to the type of training. Although obtaining a diploma does not seem to affect employment opportunities for students in general education in any significant way, the situation is very different for students in the vocational sector. For the latter, dropping out of school greatly lowers their chances of finding a job, and if they do find one it is generally less related to education and less well paying.

In the college vocational sector, the unemployment rate for drop-outs was more than double that of graduates, the proportion of related jobs twice as low and income for the first year 30% lower. In the secondary vocational sector, the likelihood of unemployment was 50% higher for drop-outs than for graduates and that of finding a related job nearly 70% lower. However, the differences in salary between the two groups were nonetheless less pronounced since in the first year drop-outs earned only 5% less than graduates.

Overall, it appears that graduates in the vocational sector enjoy more of an advantage on the labour market than their colleagues in the general sector but this advantage is almost completely neutralized by dropping out of school before obtaining a diploma. Note also that the Diploma of Collegial Studies (general sector) which is earned over a two-year period does not significantly improve the chances of entering the labour market for the first time any more than a secondary-school diploma does.

This discussion is intended to show the importance of seeing one's choice through to the end. As much as possible, students are well advised to avoid choices that involve a high risk of dropping out of school, particularly at the college level, and to remember that several vocational disciplines at the college level offer better job prospects than unfinished university studies.

Graduates and the labour market

We have just seen that dropping out of school is surely the main obstacle faced by students. In order to better judge the merits of education in the search for employment, let us now examine the situation of graduates who persevered in their studies.

It is interesting to note that nearly one out of four undergraduate students decided to continue their studies immediately after obtaining their first degree. This proportion was considerably higher than the proportion for other levels of education, which varied between 7 and 17%.

TABLE III
GRADUATES' ENTRY INTO THE LABOUR MARKET according to level of education, Quebec 1988

Status on the labour market	Secondary vocational %	College vocational %	Bachelor's degree %	Master's degree %	Doctoral degree %
In labour force	84	82	74	81	90
Employed	67	75	67	76	83
Unemployed	17	7	7	5	6
Not in labour force	16	18	26	19	10
Students	12	16	24	17	7
Other	4	2	2	2	3
Graduates (number)	9,114	10,546	20,595	3,965	235

Sources: National Graduate Survey, Statistics Canada, 1988
Relance Survey, Department of Education of Quebec, 1988

TABLE IV
CHARACTERISTICS OF THE JOBS OBTAINED according to level of education, Quebec 1988

Education-work link	Secondary vocational %	College vocational %	Bachelor's degree %	Master's degree %	Doctoral degree %
Direct	46	51	57	58	80
Indirect	20	31	30	34	17
None	34	18	13	8	3
Employed (number)	6,076	7,945	13,799	3,013	195
Average annual salary[1]	$13,600	$17,800	$26,600	$36,400	$42,300

1: based on the salary of graduates working full time.
Sources: National Graduate Survey, Statistics Canada, 1988.
Relance Survey, Department of Education of Quebec, 1988.

The unemployment rate also tells us a good deal about employment opportunities. In general, entry into the labour market appears to be facilitated by increased education. Thus, the unemployment rate was higher for graduates in the secondary vocational sector, reaching 20% compared to 6.7% for those with doctoral degrees.

This general statement must nonetheless be attenuated somewhat by the fact that graduates with bachelor's degrees appeared to experience slightly more difficulties than their peers in the college vocational sector. In fact, the unemployment rate for the latter was one percentage point lower than that of graduates with bachelor's degrees. This was true even though statistics for these two categories of graduates were not available on the same basis, i.e. one year after graduation for CEGEP graduates and two years for university graduates, which should give university graduates an advantage from the outset. Placement statistics at the university level differ from those of college vocational graduates only at the master's level.

Like placement, the link between education and work also tended to increase with education. This time, however, graduates with bachelor's degrees had a slight advantage over college graduates since only 13% of them had found a job that was not at all related to education compared to 18% for CEGEP graduates. A positive link with education was also noted with respect to salary. It should be remembered that the data presented in Table IV are based on information compiled one year after graduation for secondary and CEGEP students and two years after graduation for university students.

The situation by field of study

Naturally, the outlook that is briefly described here must be qualified according to field of study. Some disciplines offer better employment opportunities than others at an equivalent or even higher level. Everyone is very aware of this fact which explains why the most common question is: Which fields of study offer the best job opportunities?

Unfortunately the answer is not a simple one and often does not correspond to what people want to hear. In fact, there is no training that can guarantee a job, any more than there is training for which it can be said that job opportunities are nonexistent. A person who is ready to make an effort, who is more motivated than the average person and who likes what he or she is doing, will often surmount the obstacles presented by a field of training offering rather limited job prospects at the start. This person, however, should first have thoroughly assessed the problems that lie ahead. Conversely, a person who chooses a career path that he or she dislikes from the start, on the sole basis that it offers good opportunities on the labour market, is headed for failure most of the time.

Be that as it may, the fact remains that on average some disciplines offer better opportunities for entering the labour market. Thus, the considerable technological changes that have occurred over the past few years and which will accelerate in the future, greatly favour the disciplines that are most closely related to them. This is the case especially for engineering disciplines at the university level and community college technologies in applied sciences such as engineering, electronics and robotics, to name only a few. Secondary-school training is not outdone in this respect and the technologies associated with the operation of new industrial equipment also offer better employment opportunities.

The health sector is one of the sectors providing better employment opportunities at all levels of education. The placement rate for graduates in the various health-care disciplines is high. The ageing of the population will serve to maintain demand for these professionals over the next few years. Furthermore, enrolment in a number of school disciplines at the secondary and college levels has experienced a dramatic decline over the last decade, and this has contributed to shortages of qualified labour in nursing care in particular.

The computer science sector, which has grown considerably over the last two decades, will continue to provide work for many graduates. The popularity of this sector with young people has resulted in large numbers of them entering the labour market each year and the growth in employment will continue to provide opportunities for most of them. In addition, these graduates benefit from a certain versatility with respect to a labour market requiring increasingly more basic knowledge in computer science.

Administrative jobs will continue to provide work for a large number of graduates. Upper management positions are nonetheless only attained in the course of a career and are less and less directly accessible to young graduates. Management studies remain a good choice, but increasingly from the viewpoint of complementary training. They also provide access to the labour market for graduates who are willing to learn the ropes in middle management positions in the case of university graduates or clerical jobs in the case of graduates of college technology programs.

As in recent years, graduates in arts disciplines will encounter the most difficulties. Likewise, social sciences graduates will continue to face budget constraints from their main employer, the government. The number of graduates in these disciplines continues to be high despite the limited number of job openings, making the market very competitive. This situation is reflected in generally lower placement rates for these graduates. Finally, physical science graduates continue to face more difficulties on the labour market than their colleagues in applied sciences. Although promising, certain disciplines such as those associated with biotechnology have yet to see the anticipated job creation become a reality, at least at a rate that would allow a large proportion of graduates to be absorbed into the labour market.

As you may have realized by now, it is difficult to provide a simple answer to such a complex question and the partial answers given here only scratch the surface of the subject. Above all, these partial answers necessarily simplify a subject that only a more in-depth analysis could describe adequately. We therefore invite you to consult the more detailled information by discipline and by occupation contained in the two volumes of *Job Futures - Quebec* which we hope will assist them in making better choices.

Good luck!

PART II

FIELDS OF STUDY

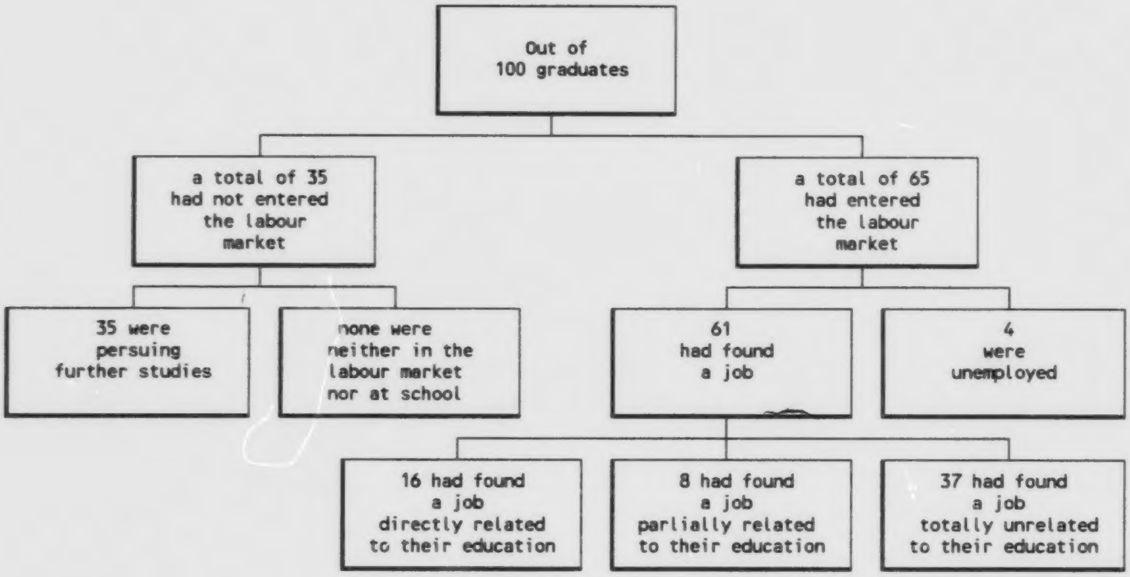
ARTS

FINE ARTS

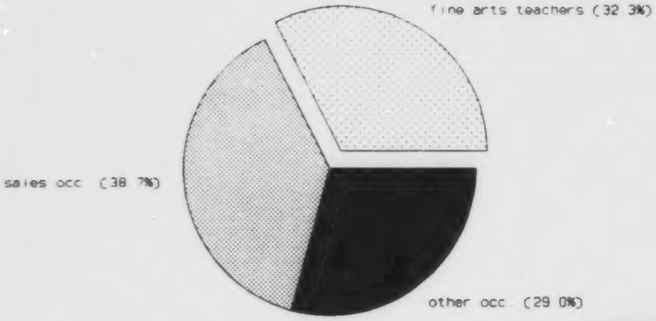
ARTS

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 35 had not entered the labour market
a total of 65 had entered the labour market
35 were persuing further studies
none were neither in the labour market nor at school
61 had found a job
4 were unemployed
16 had found a job directly related to their education
8 had found a job parlially related to their education
37 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	140	1.0	0.4
1985/90	55	0.4	1.0
1990/95	50	0.4	1.5
1995/2000	50	0.4	1.8

ARTS

FINE ARTS
VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses disciplines related to music, theatre and dance. These programs are offered by a small number of institutions, the main ones being the Drummondville, Alma, St-Laurent and Vanier Cegeps for music, Dawson, John Abbott, Lionel-Groulx and St-Hyacinthe for theatre and Vieux-Montréal for dance.

Trends and projections

From an average of 140 during the first half of the 1980s, the number of graduates in these various disciplines dropped to an average of 55 during the 1985-90 period. This represented a substantial decrease in popularity if we consider that their relative importance in relation to vocational college disciplines taken as a whole slipped from 1% to 0.3% during the same period. If their relative weighting remains the same over the coming years, an average of 50 students will graduate annually.

Occupation after graduation

The results of the Relance Survey conducted by the Department of Education clearly show the difficulties graduates in these disciplines encounter on the labour market. Less than 25% of them held a job that was at least partially related to their education after graduation. It is therefore not surprising to note that 35% of them had decided to pursue their studies further. Nevertheless, the placement rate for those who had entered the labour market was comparable to that for the average of graduates.

Occupational profile

The high placement rate for graduates who had entered the labour market can be explained primarily by the general nature of the jobs obtained. In particular, nearly 40% of them were classified in the clerk-salesperson group, one which serves as a stepping stone for all young people who have little or no experience. About 30% of these graduates held jobs in groups associated with the arts sector. In this respect, the group of musicians, with all the jobs in this category, seemed to offer the best market entry opportunities.

General picture

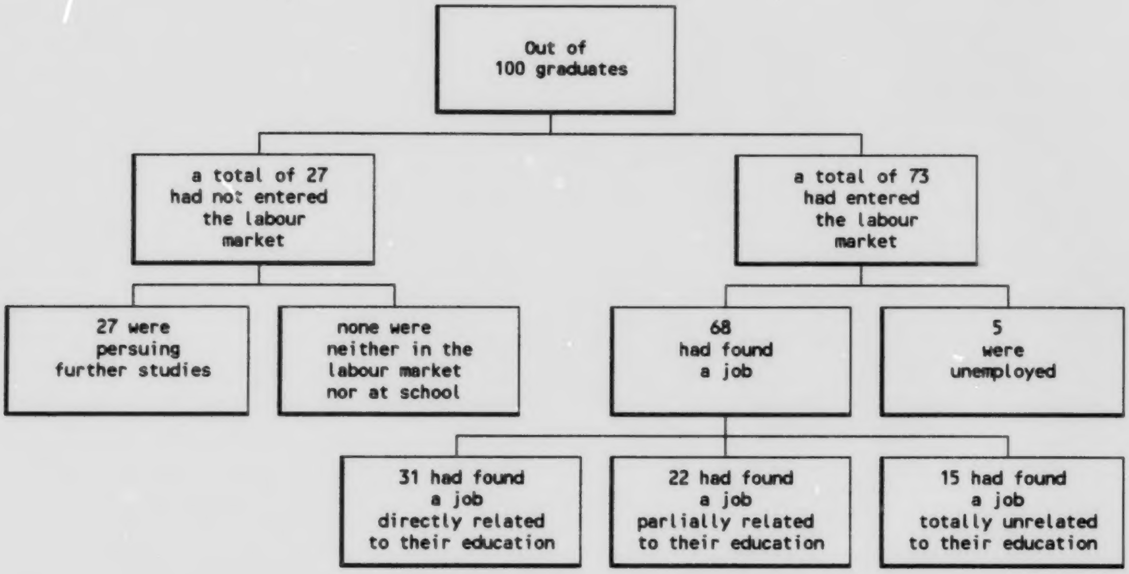
Employment opportunities in occupations related to education for graduates in this sector are among the most difficult of the various vocational college disciplines. Faced with this situation, a number of these graduates had no choice but to pursue further studies or to enter the labour market in jobs that were not specialized but which were easier to access. There is also a high proportion of part-time jobs.

The labour market situation for these graduates should not see major changes over the next decade. Opportunities for success will continue to depend on personal involvement, perseverance and talent.

MUSIC
BACHELOR'S DEGREE

ARTS

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation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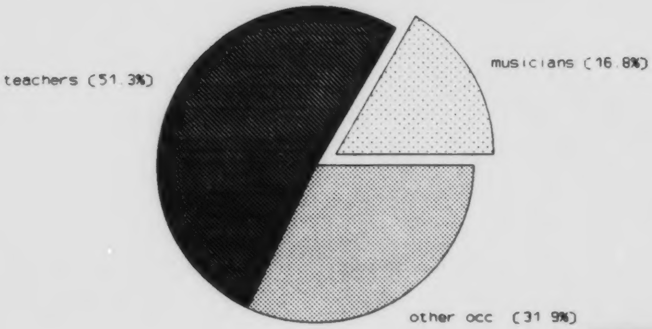
15 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	220	1.0	0.5
1985/90	270	1.1	1.0
1990/95	300	1.2	0.9
1995/2000	300	1.2	1.0

MUSIC
BACHELOR'S DEGREE

This field of study encompasses the different specialized disciplines related to the study of music, except for music teaching, which is included under the heading "Elementary-Secondary Teacher Training." Concordia, Laval, McGill, Montréal and UQAM all offer programs in music teaching. Bishop's, Concordia and McGill offer a major. There are usually music prerequisites, and many of the universities hold auditions.

Trends and projections

The number of music graduates as a proportion of the total number of graduates with bachelor's degrees has remained about 1% since the late 1970s. Whereas slightly more than 200 musicians obtained degrees in 1980, the number was more than 250 in 1988. During the 1990s, some 250 to 300 degrees will be granted each year, if the trends of the past few years continue.

Occupation after graduation

Proportionately, as many music graduates as other graduates with bachelor's degrees enter the labour force. The survey of 1986 graduates revealed that nearly 70% were working two years after graduation. The proportion of graduates working in an occupation not related to their education was somewhat higher than in other disciplines, however. Proportionately, the same number of music graduates as graduates in other disciplines decided to continue their education beyond the undergraduate level.

Occupational profile

A significant number of these graduates find jobs in teaching. Fully 50% of those who were working two years after graduation were teaching kindergarten or primary school (20%), fine arts (15%) or in some other area. All the same, 15% were actually working as musicians.

General picture

Although we do not, unfortunately, have any statistics on salaries, all indications are that music graduates find themselves in a labour market position comparable to that of other graduates with bachelor's degrees. The only fly in the ointment is that it is more difficult for them to find jobs related to music.

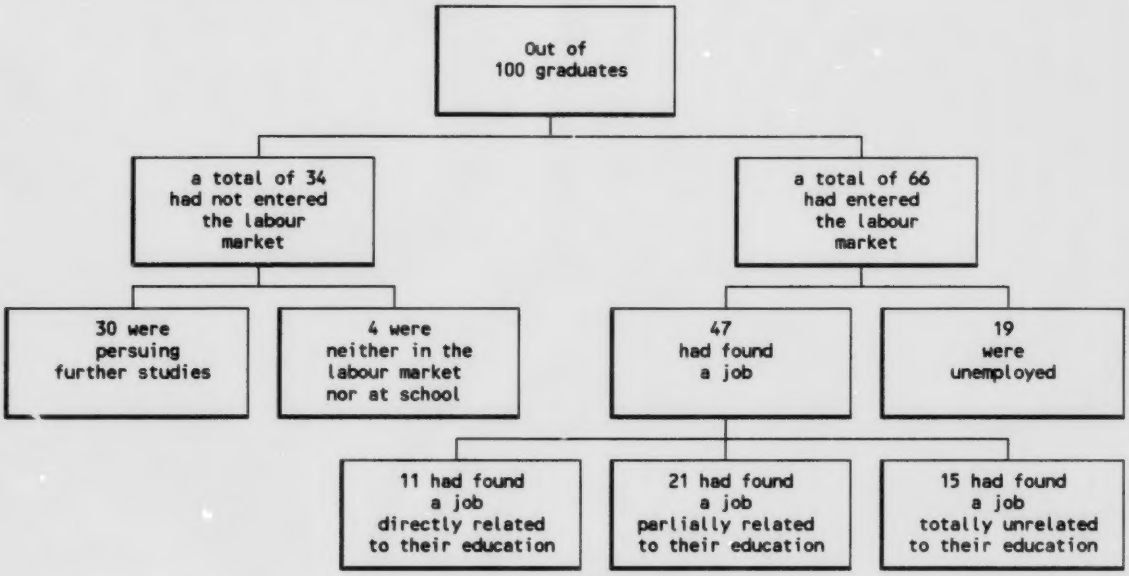
During the 1990s, graduates in this field of study interested in a teaching career may be favoured by the replacement needs that will be created by the aging of the teaching population. Those seeking a career as a professional musician will continue to be subject to the tough laws governing the arts world.

OTHER PERFORMING ARTS AND FINE ARTS

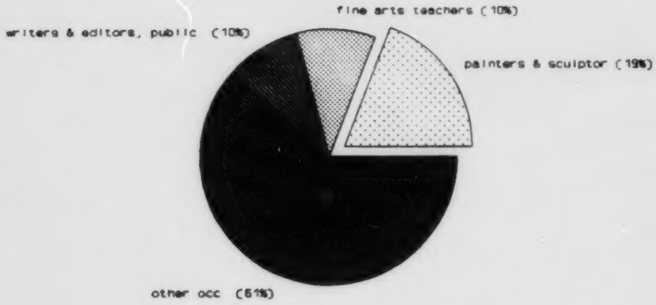
ARTS

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 34
had not entered
the labour
market
a total of 66
had entered
the labour
market
30 were
persuing
further studies
4 were
neither in the
labour market
nor at school
47
had found
a job
19
were
unemployed
11 had found
a job
directly related
to their education
21 had found
a job
partially related
to their education
15 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	350	1.6	1.4
1985/90	390	1.6	1.0
1990/95	400	1.6	1.0
1995/2000	400	1.5	1.0

ARTS

OTHER PERFORMING ARTS AND FINE ARTS
BACHELOR'S DEGREE

This field of study encompasses the specialized disciplines of the arts in general, fine arts, painting, sculpture, dance and drama. Most Quebec universities offer various programs in one or another of these disciplines. Prerequisites vary depending on discipline, and placement tests and auditions are usually held.

Trends and projections

The popularity of this field of study has been more or less constant over time, and Quebec universities have granted approximately 1.5% of their bachelor's degrees to students in these different disciplines each year since the late 1970s. If this proportion remains unchanged, demographic trends will translate into 400 graduates annually over the coming decade.

Occupation after graduation

Graduates in these disciplines are confronted with a much bleaker labour market than other groups of graduates with bachelor's degrees. According to the 1988 survey of 1986 graduates, barely 47% had entered the labour market compared with 67% of first degree graduates taken as a whole. And the unemployment rate among these graduates reached 19%, one of the highest of any university discipline. All the same, most of the few graduates who were employed were working in jobs related to their education. The discouraging general picture probably explains in large part why many of these graduates decided to pursue further studies.

Occupational profile

Despite the difficult conditions, the career paths of graduates two years after graduation reflect the link they have maintained with their discipline. Approximately 20% were working as painters or sculptors, and a not insignificant number had entered the labour market in occupations such as fine arts teachers (10%) or book editors (10%).

Salary

In the 1988 survey of graduates, the average salary ($21,900) of respondents working full time was approximately 20% lower than the average salary of other graduates with bachelor's degrees.

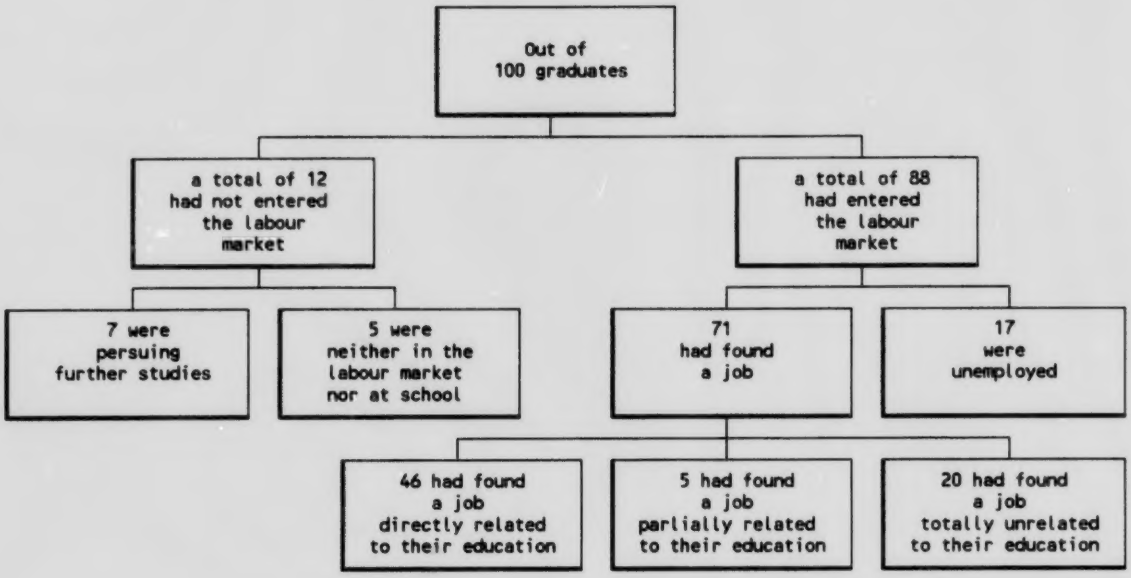
General picture

As the above analysis shows, the labour market conditions facing these graduates are among the most difficult of those awaiting graduates with bachelor's degrees. The placement rate is appreciably lower, while the unemployment rate is markedly higher than average. All the same, most of those who managed to find a job were working in a field related to their education. Because of these difficulties, a greater proportion decided to continue their education, and nearly 60% said they would not make the same choice if they could start over again.

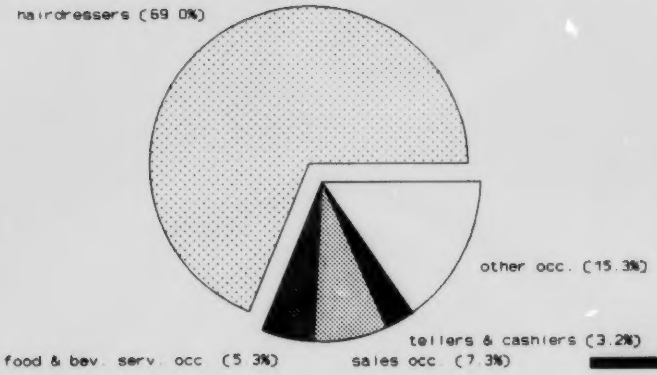
During the 1990s, labour market conditions for these graduates will remain difficult, and chances of finding a job in this field, more than in any other, will depend on perseverance, enthusiasm and talent.

HAIRDRESSING ARTS
SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 12 had not entered the labour market
a total of 88 had entered the labour market
7 were persuing further studies
5 were neither in the labour market nor at school
71 had found a job
17 were unemployed
46 had found a job directly related to their education
5 had found a job parlially related to their education
20 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	2885	7.8	---
1985/90	1535	13.3	1.0
1990/95	875	9.3	1.0
1995/2000	915	9.3	1.0

HAIRDRESSING
SECONDARY VOCATIONAL

This field of study includes men's hairdressing and women's hairdressing.

Trends and projections

Despite the drop in the number of graduates recorded in the first half of the decade, hairdressing is still one of the most popular disciplines together with secretarial studies and automobile mechanics. Some 1,500 hairdressers annually have been trained in various schools in recent years, i.e. nearly 15% of all the graduates in the secondary vocational sector.

Occupation after graduation

Seven out of ten graduates were employed at the time the Relance Survey was conducted. Since the participation rate in the labour market was 88%, one-fifth of the young people trained as hairdressers were unemployed, i.e. a proportion comparable to the average. Although the link between education and work was closer than in other disciplines, part-time jobs were more numerous (20% of jobs).

Occupational profile

The close link between education and work was clearly shown by the fact that 70% of the graduates who had found a job were working as hairdressers. Of those who were not working in hairdressing, jobs in the office work and sales category were the most frequent.

Salary

At $8,800 for the first year, the basic average salary of graduates working full time was one of the lowest earned by secondary vocational professionals. Nonetheless, part of the remuneration for these workers also comes from tips, which do not appear in the basic salary.

General picture

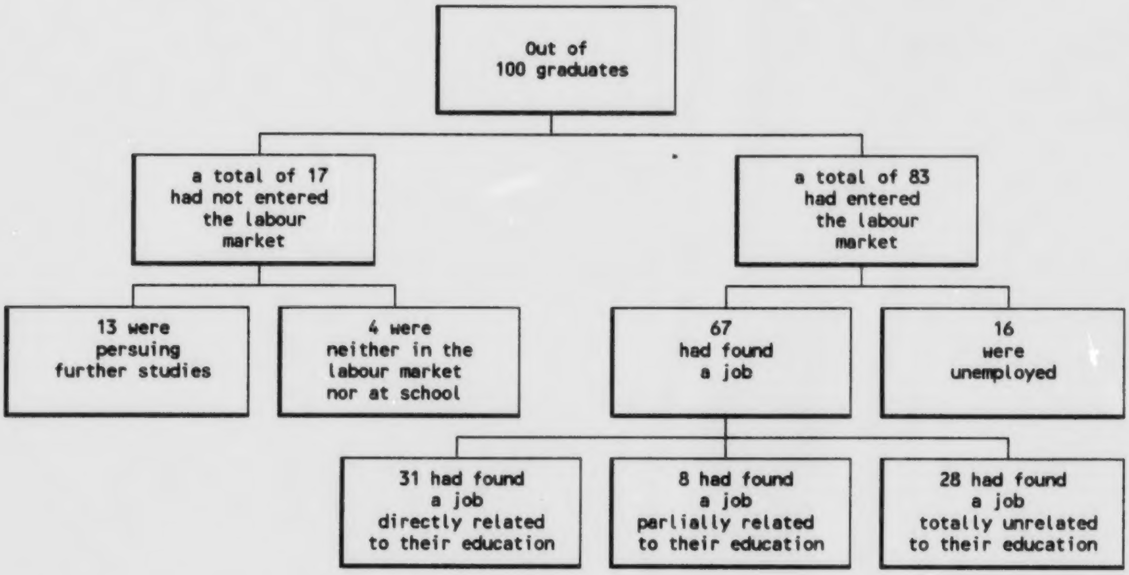
The high turnover rate of hairdressing personnel is such that each year the numerous requirements for replacements inflates the already high demand resulting from employment growth. Thus, even if traditionally the number of graduates greatly surpasses the employment growth in the hairdressing sector, job opportunities for these graduates remain good. Employment in related occupations in this sector, however, is usually had at the expense of a lower basic salary and work conditions that include broken schedules corresponding to business hours. Part-time jobs are frequent.

The employment outlook is expected to change very little over the next few years.

ESTHETICS **ARTS**

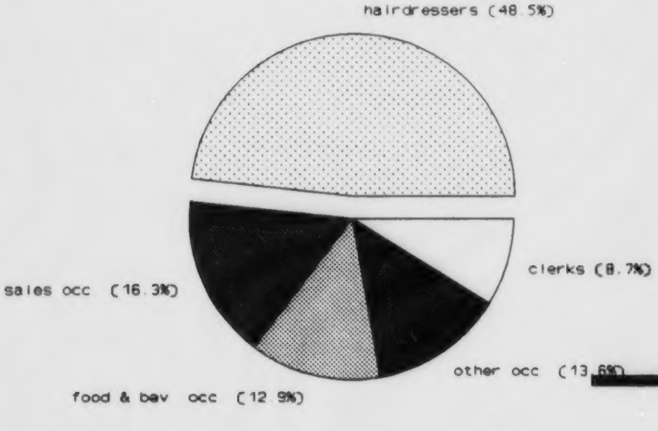
SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 17 had not entered the labour market
a total of 83 had entered the labour market
13 were persuing further studies
4 were neither in the labour market nor at school
67 had found a job
16 were unemployed
31 had found a job directly related to their education
8 had found a job parlially related to their education
28 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	800	2.7	---
1985/90	475	4.1	---
1990/95	280	3.0	---
1995/2000	290	3.0	---

ESTHETICS
SECONDARY VOCATIONAL

This field of studies includes the specialties of beauty care, cosmetics application and hair removal.

Trends and projections

Although it dropped by some 40% since 1981, the number of graduates in this field has remained more stable than in other disciplines, with its share of the total rising from 2.7% to 4.1%.

Occupation after graduation

About 80% of the graduates who entered the labour market were employed one year after graduation. One in five graduates in the labour force was unemployed, i.e. a proportion comparable to the average for the secondary vocational sector. The link between work and education was tenuous since more than 40% of the employed graduates considered their duties to be completely unrelated to their training.

Occupational profile

The group of hairdressers which includes cosmetologists, estheticians and hair-removal specialists, was the largest with nearly half the jobs. Outside this group, the occupational groups of sales and services were the most frequently encountered.

Salary

The average annual income of these graduates one year after graduation was only $8,900 according to the 1988 survey. This salary level is one of the lowest at the secondary vocational level.

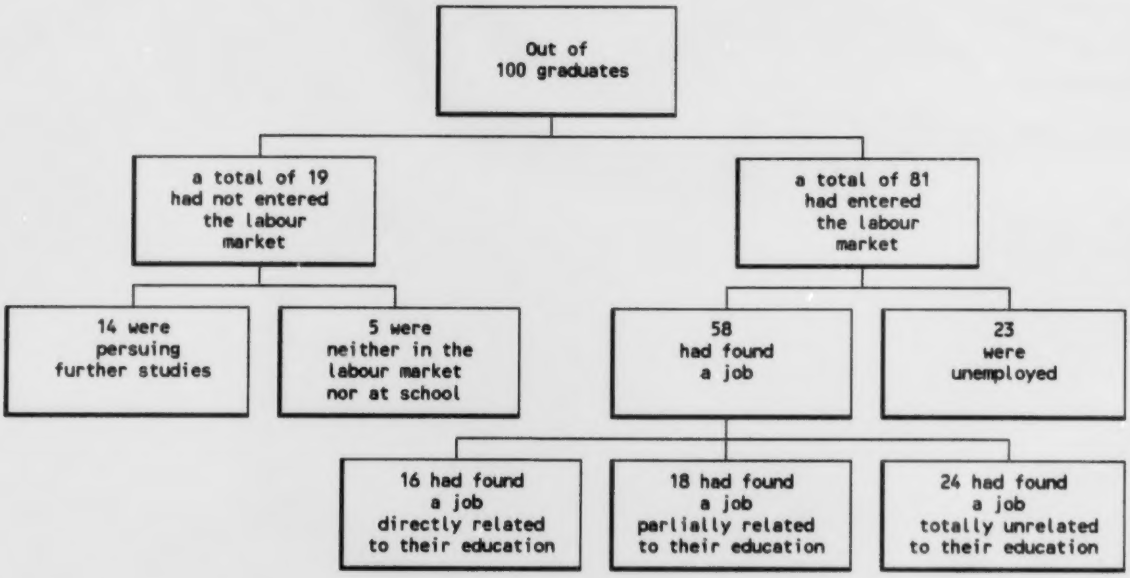
General picture

Placement opportunities for related occupations were slightly below average. The hairdressing and beauty care sector is very dependent on consumer spending. Thus, this sector greatly benefited from the vigorous growth in consumer spending after the 1981-82 recession. The last few years, however, have been marked by a slowdown in consumption which has of course reduced the growth rate in the demand for this type of professional. More consistent employment growth is expected for the 1990s but work conditions will continue to involve part-time work and working hours that reflect business hours.

FASHION AND APPAREL
SECONDARY VOCATIONAL

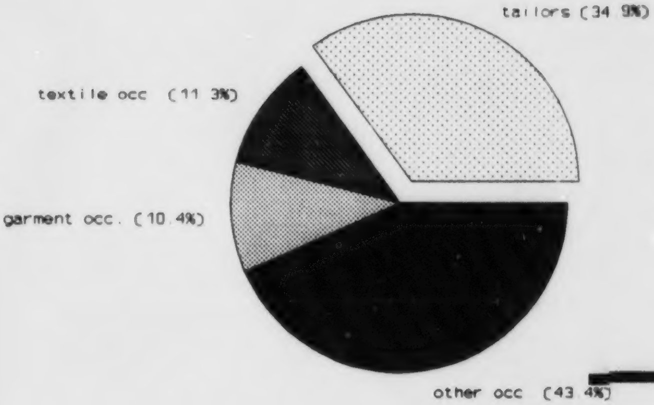
ARTS

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 19 had not entered the labour market
a total of 81 had entered the labour market
14 were persuing further studies
5 were neither in the labour market nor at school
58 had found a job
23 were unemployed
16 had found a job directly related to their education
18 had found a job parlially related to their education
24 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	625	2.1	0.6
1985/90	170	1.5	1.0
1990/95	90	0.9	0.7
1995/2000	95	0.9	1.0

This field of study includes specialties dealing with the design, making, alteration and repair of clothing.

Trends and projections

Vocational education schools have seen enrolment in the various disciplines drop by more than two thirds over the last decade from an average of more than 600 during the 1985-90 period to less than 200 as of 1985.

Occupation after graduation

All the placement indicators tend to confirm the difficulties that these graduates face on the labour market. Their employment rate is one of the lowest at the secondary level since barely three out of five graduates had found a job, leaving nearly 40% of these graduates unemployed. The education-work link is also tenuous since in 70% of cases the jobs obtained were little or not at all related to training. Despite everything, very few of the graduates continued their studies further.

Occupational profile

The occupations that were in some way related to the making of clothes represented a little more than half the jobs obtained. The groups of tailors and unskilled workers in the clothing industry were the largest with 35% and 15% of the jobs respectively. Other graduates
who had succeeded in finding jobs were working in quite a wide range of occupations in the categories of sales, office work and services.

Salary

In 1988, the average salary of the 1987 graduates was $9,300. This salary level is one of the lowest among the various disciplines at the secondary level.

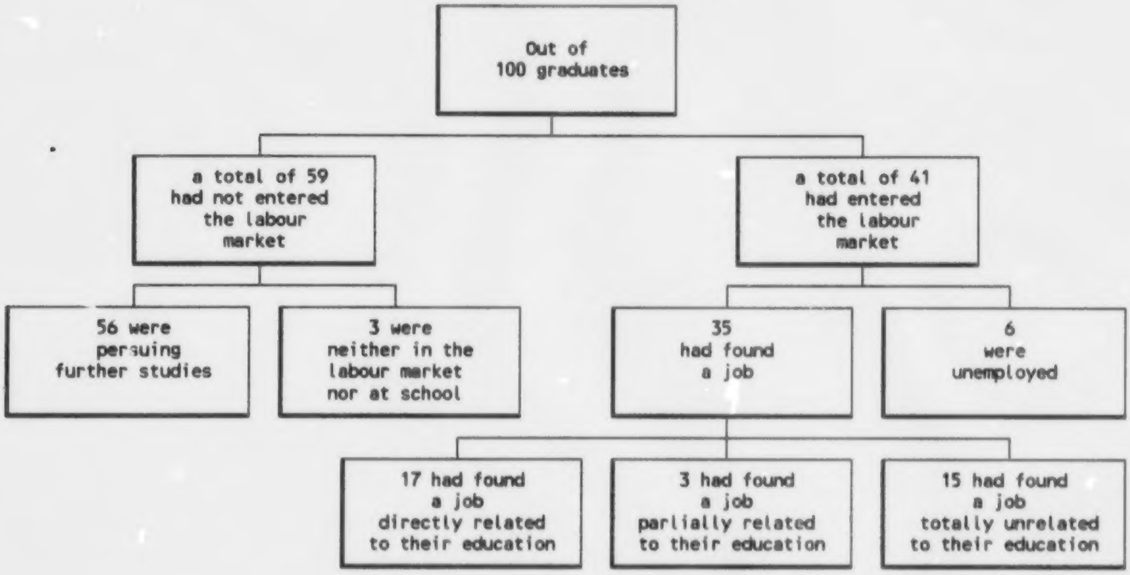
General picture

The employment outlook for these disciplines are among the most difficult of the various disciplines at the secondary level. The difficulties experienced by the clothing sector with respect to international competition have a lot to do with the labour market situation. More oriented towards the making of clothing than their colleagues at the college level, secondary graduates have also been more adversely affected than the latter by unfavourable market conditions. Nonetheless, until now only a small number of these graduates have entered the alteration sector in large stores. Yet this sector is characterized by stronger growth and in this respect provides great job opportunities.

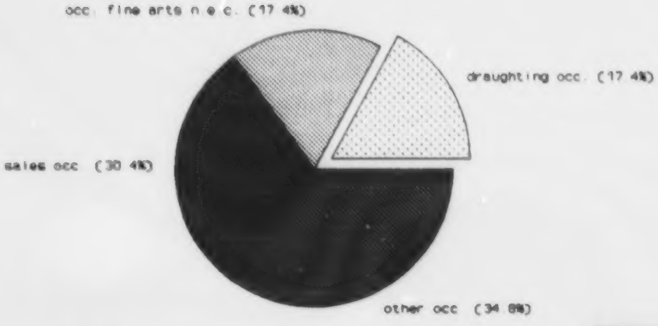
INTERIOR ARRANGEMENT **ARTS**

SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 59 had not entered the labour market
a total of 41 had entered the labour market
56 were persuing further studies
3 were neither in the labour market nor at school
35 had found a job
6 were unemployed
17 had found a job directly related to their education
3 had found a job parlially related to their education
15 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	180	0.6	0.3
1985/90	75	0.6	1.0
1990/95	85	0.9	0.8
1995/2000	90	0.9	0.8

INTERIOR ARRANGEMENT
SECONDARY VOCATIONAL

This field of study includes the disciplines of interior arrangement and displaying.

Trends and projections

After reaching an all-time high of some 290 graduates at the beginning of the decade, these study programs saw their popularity decline considerably in the following years when the annual number of graduates dropped to only 75.

Occupation after graduation

This field of training, which has a counterpart at the college level, leads a number of students to continue their studies. At least 55% of the 1987 graduates chose this program compared to an average of little more than 10% for all secondary vocational graduates. The results of those who had decided to enter the labour market showed the difficulties they faced in finding related employment. In fact, even though most of them had found a job, only three out of five performed duties that were in some way related to their education.

Occupational profile

The related jobs found by these graduates were as draftsmen/women (25%) and fine arts professionals (15%) among whom may be found the occupations of painter-decorator and decorator-display artist.

General picture

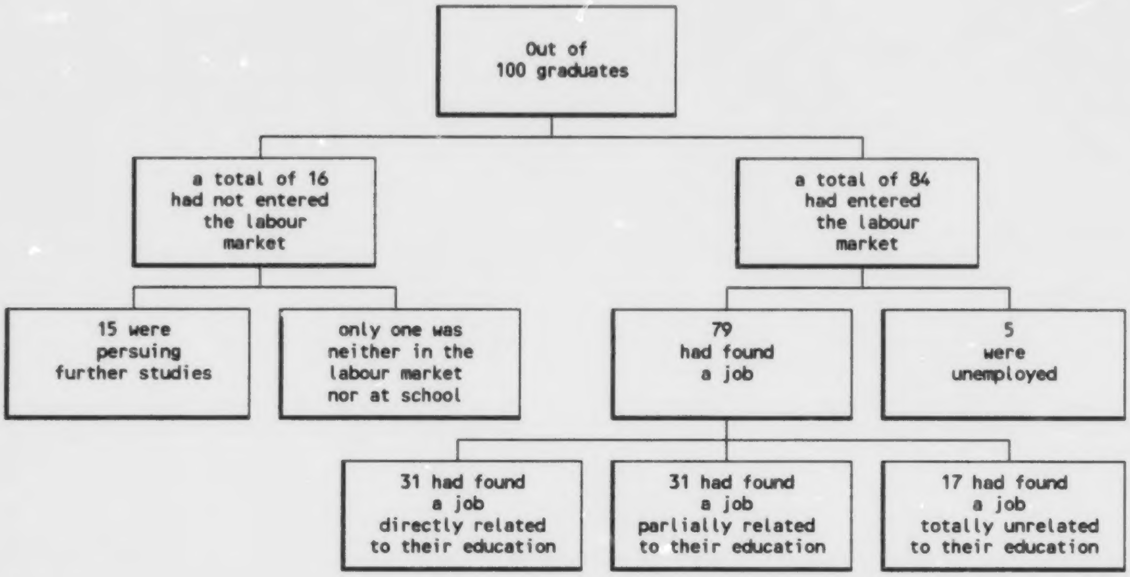
In light of the results obtained on the labour market, these graduates face more difficult market conditions than the average.
Nonetheless, they have the opportunity to continue their studies at the college level in related disciplines and thus improve their job prospects, which in recent years have benefited from the proliferation of consulting services in the furniture and home accessory business. The employment outlook for professionals in interior arrangement is expected to remain closely linked to sales.

CREATIVE ARTS

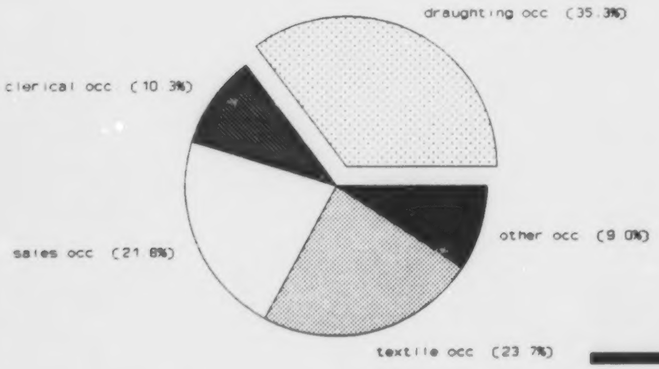
ARTS

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 16 had not entered the labour market
a total of 84 had entered the labour market
15 were persuing further studies
only one was neither in the labour market nor at school
79 had found a job
5 were unemployed
31 had found a job directly related to their education
31 had found a job parlially related to their education
17 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	210	1.4	0.3
1985/90	175	1.2	1.0
1990/95	160	1.1	0.8
1995/2000	170	1.1	0.9

CREATIVE ARTS
VOCATIONAL COLLEGE DIPLOMA

This field of studies encompasses the specialties of interior design, fashion design, men's fashion design and women's fashion design.

Trends and projections

As in other arts disciplines, over the 1980s the number of graduates dropped at a slightly more rapid rate than that observed for the disciplines taken as a whole. Given the expected decrease in the school population, the number of these graduates should continue its downward course to reach an average of 160 to 170 over the next decade.

Occupation after graduation

In the year after graduation, the unemployment rate for graduates who had entered the labour market was only half as great as the average for vocational college graduates. This good performance, however, was at the cost of a less direct link between education and work since barely 40% of them described a direct link.

Occupational profile

Among the most closely related occupations, the positions of designer and illustrator offered the best job prospects. Nearly 35% of the employed graduates were working as interior decoration consultants, designers or fashion designers, exhibition and display designers, etc. For their part, the groups associated with textile production or clothing accounted for nearly 25% of the jobs obtained. In this category, we found occupations that were more closely related to education such as those of patternmakers and tailors but also other, less directly related jobs, such as foremen/women, inspectors and labourers. Finally, the sales categories constituted the third largest group, with 20% of the jobs.

Salary

The average salary of graduates who were working full time one year after graduation was $13,600 annually. This salary level was much lower than the average salary of graduates in the vocational sector, who earned $17,800.

General picture

Prospects for labour market entry were severely affected during the 1981-82 recession. The years of vigorous growth which followed made placement recovery possible in related occupations, without however reaching the average for the college level.

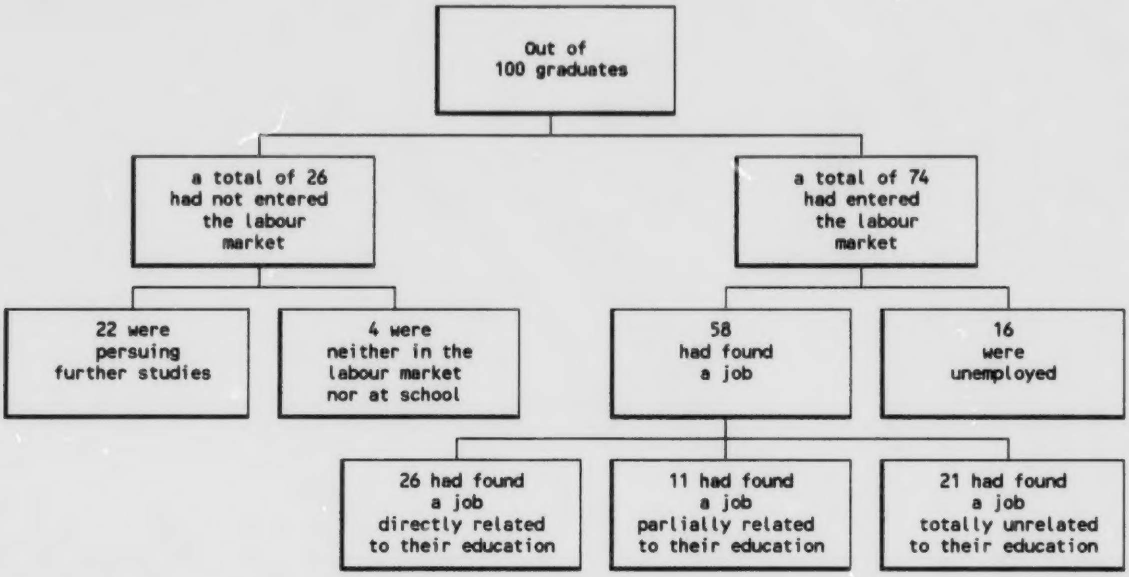
Employment prospects, which are highly dependent on the textile and clothing sector, are suffering from the constraints imposed by restructuring in the sector to meet the stiff competition of imports from countries with low mass production costs. A tight market and competition from countries with a good reputation for top-of-the-line products also make access to fashion-related occupations difficult.

With respect to interior decoration, the opening up of consultant services in the retail furniture and decoration accessories business has certainly helped to democratize access to these services and prompted a faster expansion of job opportunities. It is expected that job prospects for these graduates will continue to be the same during the next few years, while remaining closely linked to sales.

PRINTING AND ADVERTISING — ARTS

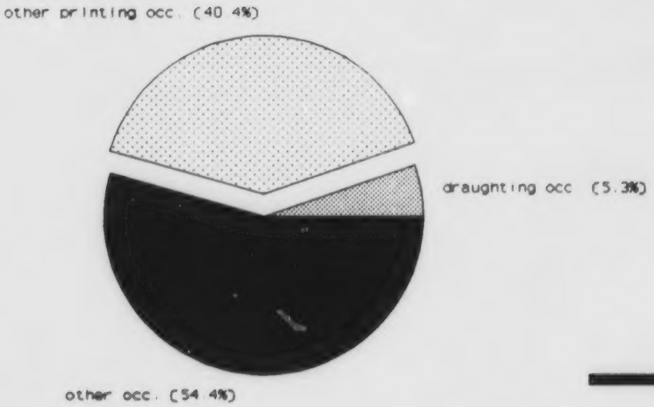
SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 26 had not entered the labour market
a total of 74 had entered the labour market
22 were persuing further studies
4 were neither in the labour market nor at school
58 had found a job
16 were unemployed
26 had found a job directly related to their education
11 had found a job parlially related to their education
21 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	595	2.0	0.1
1985/90	255	2.2	1.0
1990/95	295	3.1	0.3
1995/2000	310	3.1	0.5

PRINTING AND ADVERTISING
SECONDARY VOCATIONAL

This field of study includes the specialties of offset and automatic platen printing, photolithography and commercial drafting.

Trends and projections

The popularity of these disciplines have followed that of the secondary professional sector taken as a whole and have maintained their share of total graduates.

Occupation after graduation

A large number of these graduates continued their studies after graduation. Thus, less than three out of five graduates were employed at the time of the 1987 Relance Survey. The unemployment rate among these graduates was 20% compared to an average of 15% for secondary vocational graduates in the labour force. Although an above-average proportion of these jobs were directly related to education, jobs that were unrelated to studies were also proportionally more numerous. However, part-time as well as temporary jobs were less frequent.

Occupational profile

Unlike their older colleagues in college, the occupational profile of these secondary graduates was dominated more by jobs directly related to printing than to commercial drafting. While 30% of the graduates in the latter discipline were working as draftsmen/women, 45% of those in printing technology were working in one of the occupational groups in printing. These were the more accessible press operator jobs, with 20% of the jobs obtained by graduates in printing technology. Like many other sectors in secondary vocational education, young people who had found work that was unrelated to their studies had looked to less specialized jobs as unskilled workers or clerks.

Salary

At $13,000 the first year, the average annual salary of graduates working full time was somewhat lower than that of secondary vocational graduates taken as a whole.

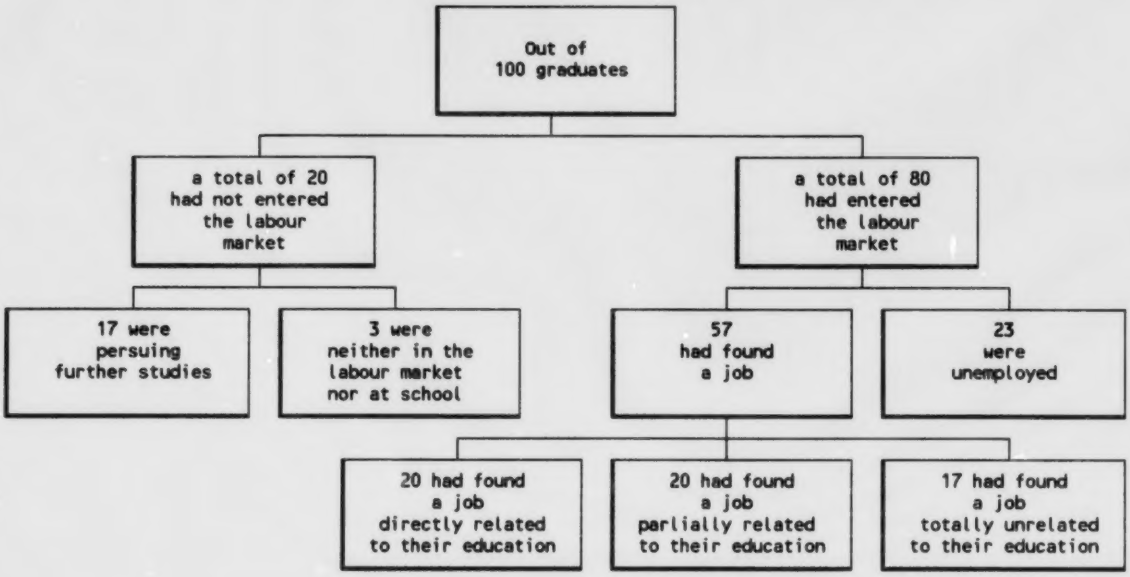
General picture

Over the past few years, these graduates faced more difficulties entering the labour market than their colleagues in other disciplines. Significant technological changes have occurred in the printing sector, thus creating new demand for personnel skilled in the use of new equipment. In this respect, college-level graduates appear to have benefited more from this growth than graduates at the secondary level.

PHOTOGRAPHY **ARTS**

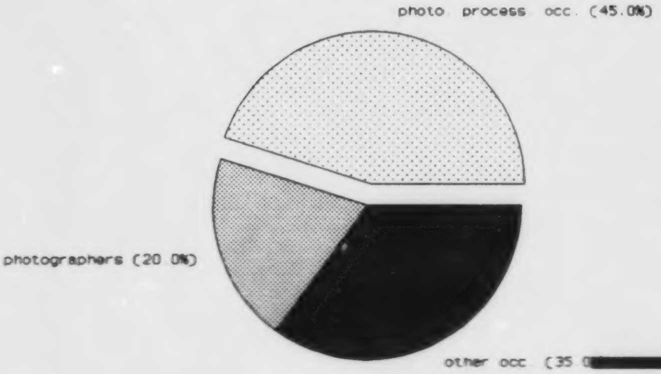
SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 20 had not entered the labour market
a total of 80 had entered the labour market
17 were persuing further studies
3 were neither in the labour market nor at school
57 had found a job
23 were unemployed
20 had found a job directly related to their education
20 had found a job parlially related to their education
17 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	45	0.2	1.7
1985/90	40	0.3	1.0
1990/95	45	0.5	0.5
1995/2000	45	0.5	0.6

PHOTOGRAPHY
SECONDARY VOCATIONAL

This program is intended to teach photography techniques and photo lab techniques.

Trends and projections

The popularity of this discipline with young people in the secondary professional sector has remained steady over the past few years, attracting an average of 35 to 50 graduates per year.

Occupation after graduation

According to the 1988 Relance Survey, 20 of the 35 1986 graduates were employed one year after graduation. Although 14 of them had found jobs related to their education, seven of them were obliged to accept jobs which, in their opinion, were completely unrelated to their training.

Occupational profile

The most accessible related jobs for these graduates were those of photo lab technician, which accounted for nine of the 20 employed graduates. Only four of these graduates were working as professional photographers.

General picture

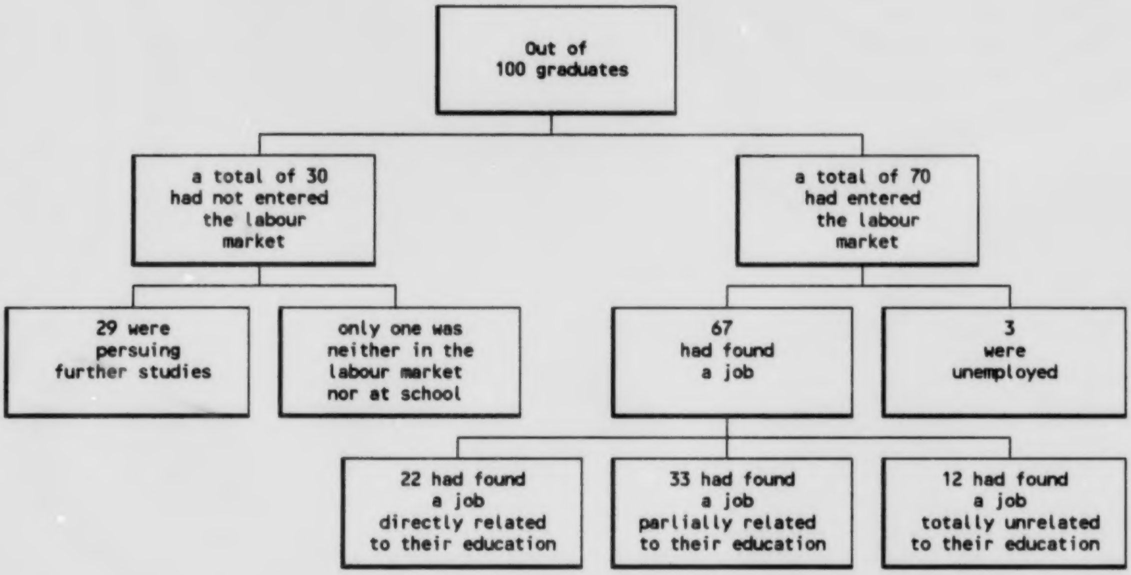
The employment opportunities for these graduates are limited and mostly related to lab technology rather than actual photography. More sophisticated equipment which reduces the requirement for specialized labour and rationalization in the sector limit job prospects even more. Without being inaccessible, the career of professional photographer requires long-term ambition.

COMMERCIAL AND ADVERTISING ARTS

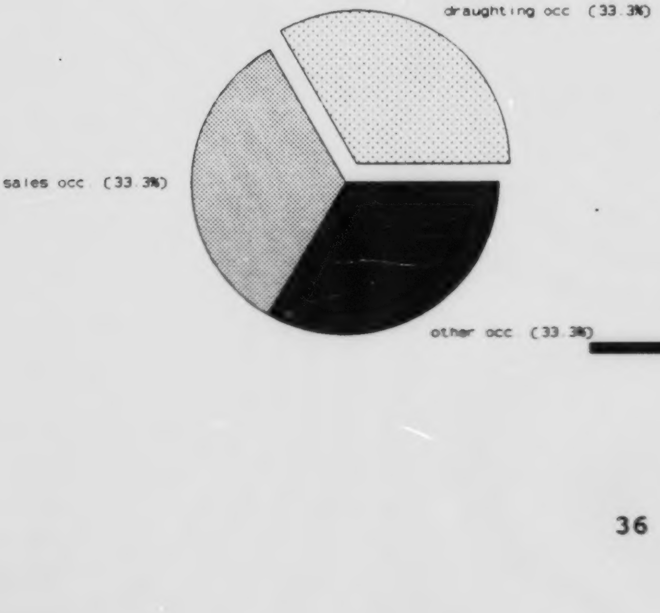
ARTS

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 30 had not entered the labour market
a total of 70 had entered the labour market
29 were persuing further studies
only one was neither in the labour market nor at school
67 had found a job
3 were unemployed
22 had found a job directly related to their education
33 had found a job parlially related to their education
12 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	140	0.9	0.3
1985/90	120	0.8	1.0
1990/95	110	0.7	0.9
1995/2000	115	0.8	1.0

COMMERCIAL AND ADVERTISING ARTS
VOCATIONAL COLLEGE DIPLOMA

At the college level this field of study encompasses the specialties of window display design (Dawson, Rivière-du-Loup, Ste-Foy, Vieux-Montréal), industrial design technology (Vieux-Montréal, Ste-Foy) and fashion merchandising (Lasalle College, Notre-Dame de Foy campus).

Trends and projections

The popularity of this field of training decreased somewhat during the 1980s, with the number of graduates slipping from 140 to 120 on average between the first and the second half of the decade. This trend should continue over the coming decade due to the demographic decline which will affect young people. Thus, over the next decade an average of 110 to 115 graduates annually is anticipated in this discipline.

Occupation after graduation

According to the data gathered through the 1988 Relance Survey, a slightly lower than average proportion of graduates was entering the labour market. However, placement among these graduates was higher, as shown by their unemployment rate of 4.2% compared to 8.5% for vocational college graduates taken as a whole. The employed graduates nonetheless considered their duties to be less directly linked to education than the average, even if this link was considerable overall.

Occupational profile

Of the jobs directly related to education, the occupational group of designers, which accounted for nearly 40% of employed graduates, was the most frequently encountered. The other most represented groups were mainly in the category of specialized sales work.

Salary

Respondents to the survey who were working full time in the year after graduation were earning an average of $15,500 annually, a slightly lower level than the $17,800 average at the college level.

General picture

Compared to graduates in other collegial disciplines, the employment outlook in occupations directly linked to education appeared to be slightly lower than the average over the past few years. It is interesting to note that the outlook was further dimmed by the tighter job market which accompanied the 1981-1982 recession. It should also be noted that these graduates shared essentially the same market as university graduates in applied arts. Even if their placement rate, all occupations considered, appeared to be to their advantage, that of more directly linked occupations (designers and illustrators) reached 70% among graduates with bachelor's degrees. It is therefore not surprising to note that an appreciably higher than average proportion of these graduates decided to pursue further studies.

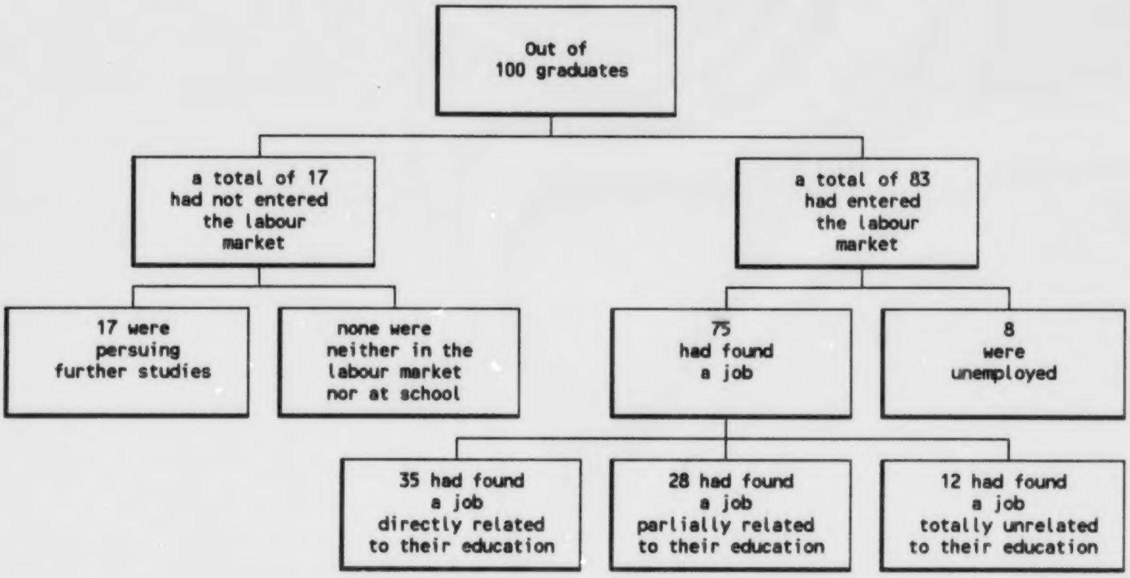
Over the coming years, the forecast requirement for these professionals indicates that a slight tightening of the market can be expected. The market should therefore continue to offer slightly lower than average job opportunities.

GRAPHIC AND AUDIOVISUAL ARTS

ARTS

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation



Out of 100 graduates

a total of 17 had not entered the labour market

a total of 83 had entered the labour market

17 were persuing further studies

none were neither in the labour market nor at school

75 had found a job

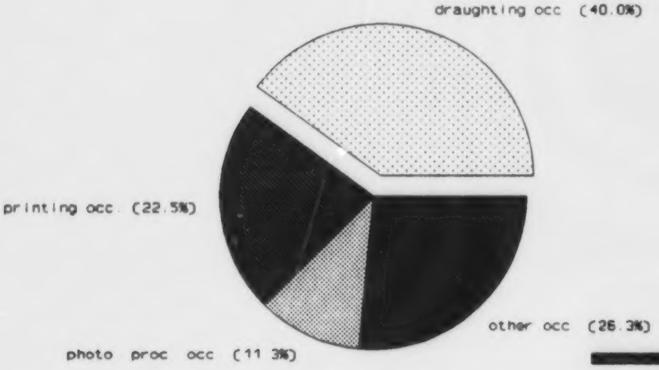
8 were unemployed

35 had found a job directly related to their education

28 had found a job parlially related to their education

12 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	190	1.3	---
1985/90	150	1.1	1.0
1990/95	130	1.0	0.4
1995/2000	135	1.0	0.6

ARTS

GRAPHIC AND AUDIOVISUAL ARTS

VOCATIONAL COLLEGE DIPLOMA

This group of disciplines includes specialties in photography, graphics and printing. Graphics programs are offered in the Montreal, Quebec City, Lower North Shore and Sherbrooke areas, whereas printing programs are offered only at Ahuntsic College in Montreal.

Trends and projections

After peaking at around 200 graduates in the mid 1980s, the number of graduates started to drop and stabilized at 140 towards the end of the decade. If it remains at its current level, the number of graduates should experience a slight decrease over the next few years owing to the lower school population at this level.

Occupation after graduation

According to the Relance Survey, 75% of the graphics and audiovisual graduates who had entered the labour force were employed in the year after graduation. While the relation between education and work was generally comparable to the average, it tended to be less direct. The unemployment rate for these graduates was comparable to the average.

Occupational profile

The occupational profile of employed graduates was dominated by the group of designers which represented about 40% of those working. With 22.4% of the jobs, the groups in the printing sector offered a large number of openings. In other respects, photography laboratory technicians constituted the third largest occupational group.

Salary

The average annual salary of the graduates working full time in the year after graduation was $17,500.

General picture

Over the past few years, graduates in these disciplines faced a labour market with employment opportunities largely comparable to the average. Graphics graduates benefited greatly from the increase in the number of specialized magazines and the expansion of their market into technical and advertising documents which, in addition to beinf in full growth, are increasingly enlisting the services of professional. On the other hand, graduates in the printing sector also benefited from the major technological changes which marked the sector over the past few years, giving rise to the demand for new skills in the area of press operation and photoengraving.

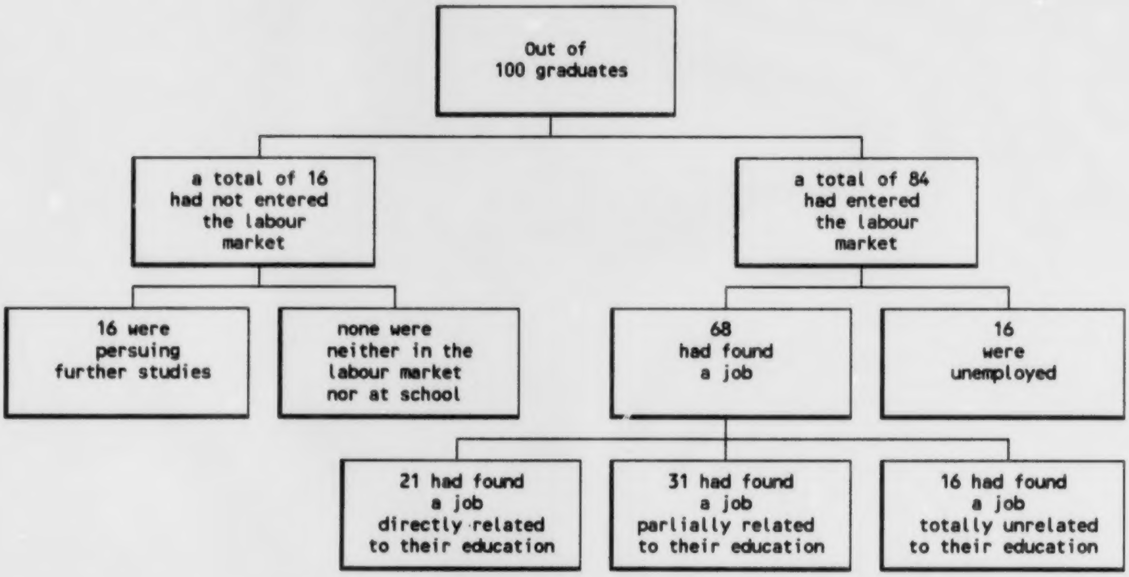
Although they are still being felt, the impact of these changes will tend to diminish as a growth factor. In this context, market entry opportunities could tighten somewhat, slipping slightly below the average of all the occupations associated with the vocational college sector.

APPLIED ARTS

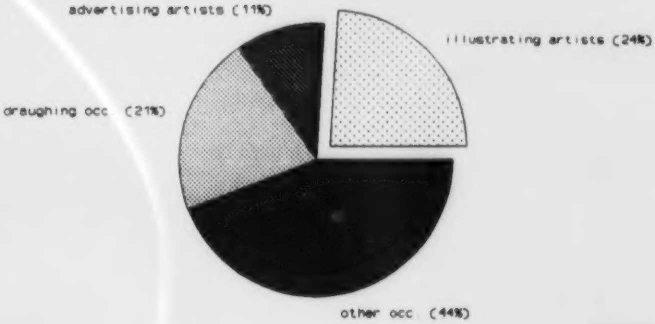
BACHELOR'S DEGREE

ARTS

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 16 had not entered the labour market
a total of 84 had entered the labour market
16 were persuing further studies
none were neither in the labour market nor at school
68 had found a job
16 were unemployed
21 had found a job directly related to their education
31 had found a job parlially related to their education
16 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	345	1.6	0.4
1985/90	365	1.5	1.0
1990/95	350	1.4	0.7
1995/2000	350	1.4	0.8

APPLIED ARTS
BACHELOR'S DEGREE

This category includes graduates who studied drafting, graphic arts, design, photography, fashion, interior decoration and other applied arts. There is such a wide variety of disciplines that it is impossible to list here all the different programs offered by the various universities. We can, however, mention the industrial design program offered by the University of Montréal, the visual arts programs offered by the different campuses of the University of Quebec and by Concordia, and the photography program at McGill.

Trends and projections

After a slight rise in popularity in the late 1970s, applied arts have since maintained a more or less constant appeal for students. The number of graduates in relation to graduates with bachelor's degrees in other disciplines rose from 0.5% in 1977 to 1.7% in 1984 and has remained at about 1.5% since then. Over the next 10 years, the number of graduates in these disciplines should be approximately 400 annually, if this percentage remains the same.

Occupation after graduation

The labour market performance of these graduates is unusual in comparison with that of graduates in other fields. While they enter the labour market as easily as other graduates, both in terms of the proportion of graduates employed two years after graduation and the link between education and job, a high percentage of these graduates surveyed in 1988 were unemployed. This reflects the greater labour market attachment of these graduates, few of whom had decided to continue their education.

Occupational profile

Occupations pursued by these graduates were predominantly in the artistic field, mainly in the groups of illustrators and commercial artists (25%) and draftsmen and interior decorators (10%). The group of technical drawers was also strongly represented among the occupations chosen by these graduates (20%). Besides drawers of architectural plans and mechanical drawings, the last-mentioned group includes cartographer-drawers and illustrators of technical publications.

General picture

Unfortunately, we were unable to gather statistics on the salaries earned by these graduates. Available information does indicate, however, that they are in a moderately favourable labour market position in terms of job opportunities. A high unemployment rate along side an equally high percentage of employed graduates point to high turnover in occupations related to this field of study and resultant temporary layoffs.

During the 1990s, labour market prospects for these graduates should remain favourable, considering the growing popularity of printed advertising, and the importance of technical manuals for new technologies and of the visual and functional presentation of industrial and household objects.

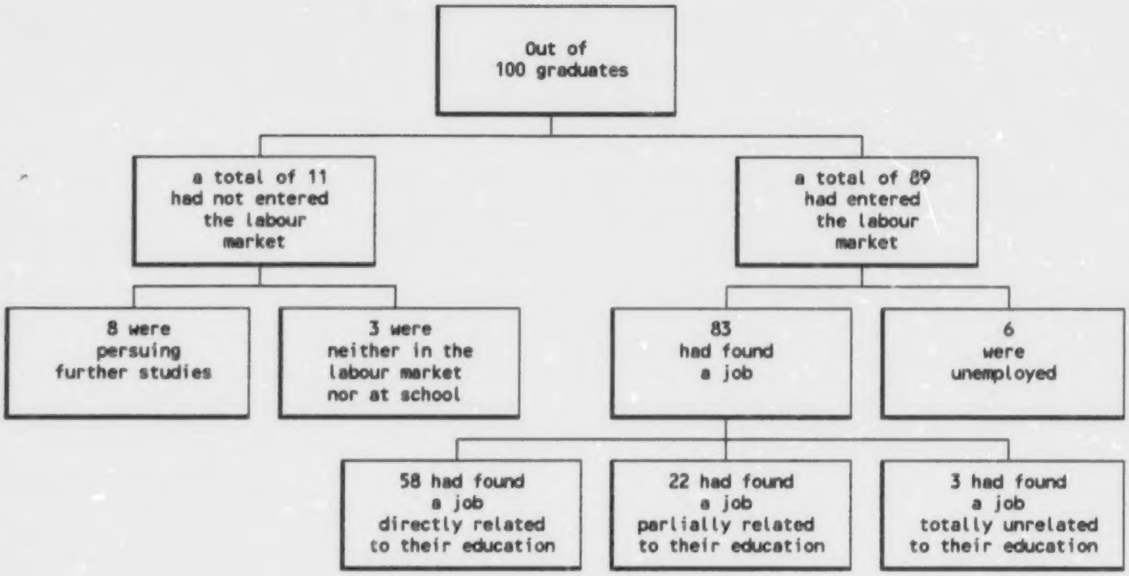
EDUCATION

ELEMENTARY-SECONDARY TEACHER TRAINING

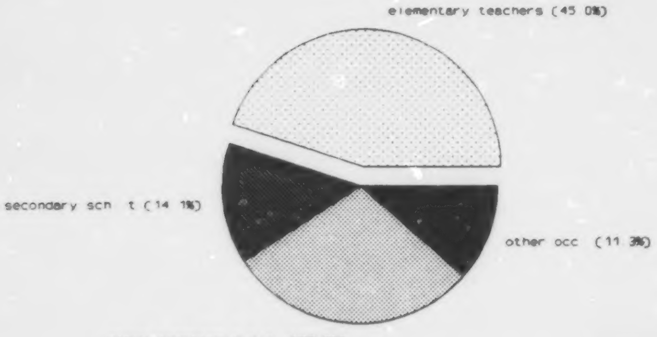
BACHELOR'S DEGREE

EDUCATION

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 11 had not entered the labour market
a total of 89 had entered the labour market
8 were persuing further studies
3 were neither in the labour market nor at school
83 had found a job
6 were unemployed
58 had found a job directly related to their education
22 had found a job partially related to their education
3 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	2065	9.3	0.2
1985/90	1805	7.3	1.0
1990/95	1850	7.2	0.9
1995/2000	1850	7.2	0.9

EDUCATION

ELEMENTARY-SECONDARY TEACHER TRAINING
BACHELOR'S DEGREE

This field of study encompasses all specialized training for teaching in elementary and secondary schools; pre-elementary school teachers are included in the field of study "Teacher Training, Other." Most Quebec universities offer this program at the bachelor's and/or major level. Besides a college diploma or equivalent, there is no specific prerequisite for this program.

Trends and projections

The popularity of this discipline has declined steadily since the late 1970s. Whereas it accounted for 15% of graduates with bachelor's degrees in 1979, the proportion has been no more than 7% in the last few years. All the same, universities continue to provide a strong contingent of graduates each year. A large number of these graduates, however, are teachers who had gone back to university for professional development, as attested by the appreciably higher average age compared with other disciplines. If the trends of the last few years continue, an average of 1,850 students will graduate in this field of study each year in the 1990s.

Occupation after graduation

A percentage of graduates appreciably higher than the average held jobs two years after graduation, and the jobs were more often directly related to their education. This may be explained in part by the fact that a higher percentage of students already had jobs before beginning their degrees. Among graduates who studied full time, the placement rate was closer to the average for graduates with bachelor's degrees, but the percentage of jobs directly related to education was markedly higher than average. Few graduates in this discipline decided to pursue further studies after graduation.

Occupational profile

The vast majority of graduates who had a job two years after graduation were working in teaching (90% of employed graduates). More than 45% were working as kindergarten or elementary school teachers and 15% as secondary school teachers.

Salary

In the 1988 survey of 1986 graduates, respondents working full time reported an average annual salary of $29,200, a salary level 10% higher than the average for graduates with bachelor's degrees.

General picture

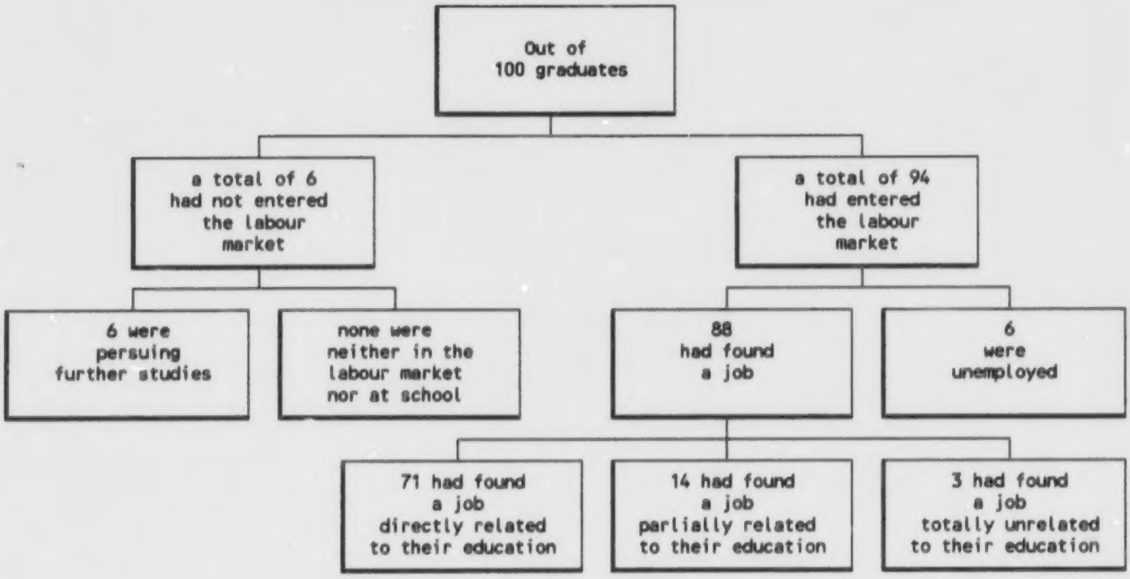
The general labour market picture for these graduates seemed decidedly better on average than for graduates with bachelor's degrees in other disciplines. These glowing statistics, however, are attributable in part to the fact that a significant percentage of these graduates already had jobs before finishing their degrees, which they earned by studying part time (professional development). A greater than average proportion would make the same academic choice if the occasion presented itself again.

The 1990s could see a reduction in the number of school children, leading to cutbacks in teaching staff, especially in secondary schools. The expansion of the day-care network, however, could provide openings for future graduates. Requirements may increase as we approach the year 2000 because of the aging of the teaching population.

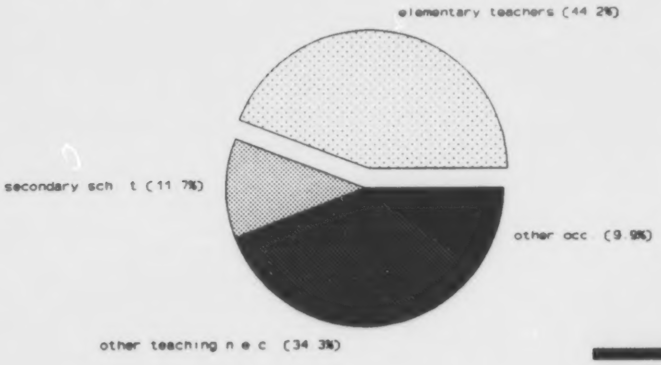
TEACHER TRAINING
OTHER
BACHELOR'S DEGREE

EDUCATION

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 6 had not entered the labour market
a total of 94 had entered the labour market
6 were persuing further studies
none were neither in the labour market nor at school
88 had found a job
6 were unemployed
71 had found a job directly related to their education
14 had found a job partially related to their education
3 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	955	4.3	0.3
1985/90	770	3.1	1.0
1990/95	800	3.1	0.8
1995/2000	800	3.1	0.9

EDUCATION

TEACHER TRAINING
OTHER
BACHELOR'S DEGREE

This field of study consists mainly in training for teaching at the pre-elementary, postsecondary and other higher education levels. Most Quebec universities offer this program of studies at the undergraduate level (bachelor's degree or major and minor). There is no prerequisite except for a Diploma of Collegial Studies or equivalent.

Trends and projections

After a slight rise in the early 1980s, the popularity of this training remained more or less constant over the second half of the decade. As in the case of elementary and secondary school teacher training, a number of students in this discipline are teachers engaged in professional development. Moreover, many graduates in other disciplines who would like to teach at the secondary or college level enrol in this kind of training. If the trends of the last few years continue, approximately 800 students will graduate in this field of study annually from Quebec institutions over the next 10 years.

Occupation after graduation

A high percentage of graduates in this sector were employed after graduation, and the proportion of jobs directly related to education was among the highest for graduates with bachelor's degrees. This decidedly better than average performance may be explained in part by the fact that a significant number of students already had jobs before beginning their degrees. Few graduates in this discipline decided to pursue further studies.

Occupational profile

The teaching occupations made up the most frequently observed group among employed graduates in this discipline (90% of employed graduates). Kindergarten and primary school teachers were by far the largest group (45%), followed closely by teachers n.e.c. (30%). The latter group includes, among others, educational consultants and adult education teachers.

Salary

In the survey of graduates conducted in 1988, respondents in this field of study reported an average annual salary of $28,100, a salary level approximately 5% higher than the average for respondents with bachelor's degrees.

General picture

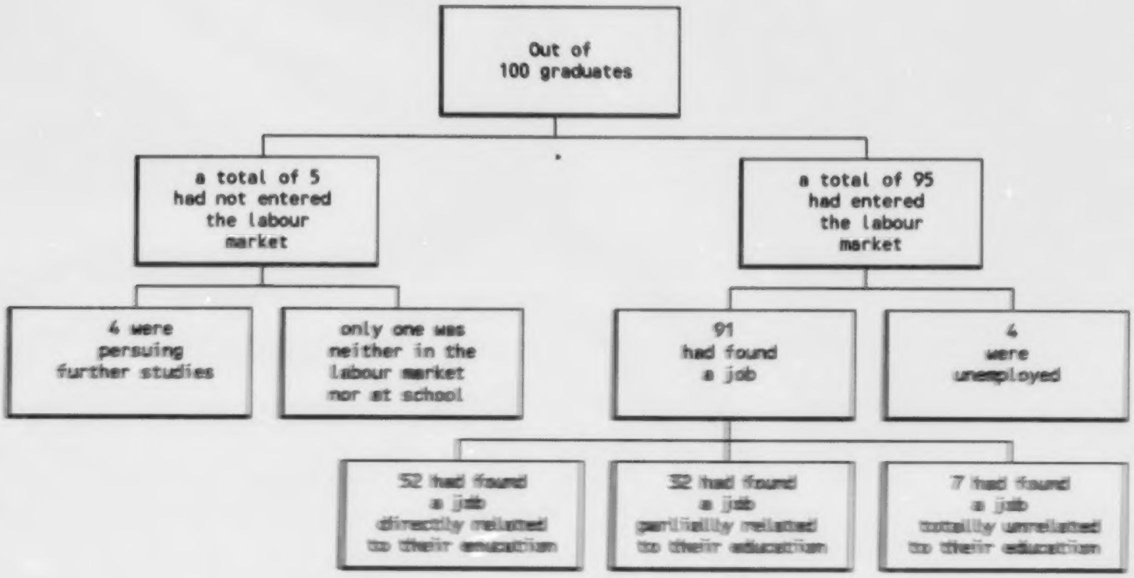
The general labour market picture for these graduates was clearly favourable. However, one must not lose sight of the fact that a not insignificant number of these graduates were teachers engaged in professional development who already had jobs before beginning their degrees. Their satisfaction with their education was very high; 90% would make the same choice.

Over the coming years both positive and negative labour market trends will affect these graduates. On the positive side, replacement requirements will likely rise as we approach the year 2000 and the development of the day-care network and adult vocational training could create openings. On the negative side, we cannot pass over in silence the cutbacks in teaching staff that are expected to accompany the reduction in the number of school children.

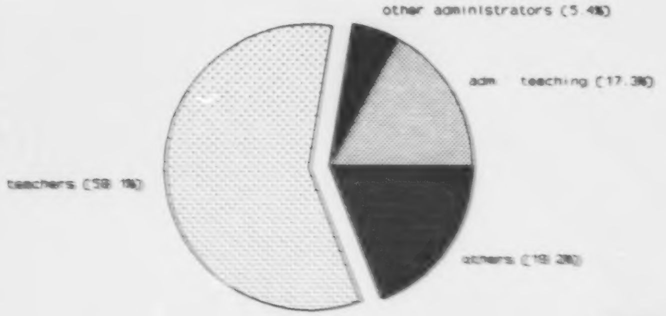
TEACHER TRAINING
MASTER'S DEGREE AND DOCTORATE

EDUCATION

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 5 had not entered the labour market
a total of 95 had entered the labour market
4 were persuing further studies
only one was neither in the labour market nor at school
91 had found a job
4 were unemployed
52 had found a job directly related to their education
32 had found a job partially related to their education
7 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	520	12.6	1.1
1985/90	595	11.7	1.0
1990/95	575	12.1	0.9
1995/2000	530	12.1	1.0

EDUCATION

TEACHER TRAINING
MASTER'S DEGREE AND DOCTORATE

This field of study encompasses studies at the master's and doctoral levels in the disciplines of education, comparative education, guidance counselling and educational administration.

Trends and projections

Except in 1986, the number of graduates in this field of study has grown at the same rate as that of graduates with master's degrees and doctorates as a whole. If this trend continues over the coming years, less favourable demographic pressures will bring the average number of degrees granted annually to approximately 530 by the end of the 1990s.

Graduates' labour market participation

Like the participation rate of graduates with bachelor's degrees in the teaching disciplines, the labour market participation rate of these graduates was significantly higher than that of graduates in other disciplines at the same university level. The placement rate of graduates who had entered the labour market was also above average, and the link between education and employment was more direct. Nearly 40% of employed graduates, however, held a similar job before starting their degrees.

Occupational profile

Graduates were heavily concentrated in teaching occupations. Elementary and secondary school teachers accounted for no less than 30% of employed graduates. Compared with their colleagues with bachelor's degrees, a higher percentage of these graduates held management positions in the educational sector. Nearly 30% of graduates who were not working in the same kind of position after as before their degrees held such management positions.

Salary

The average annual salary of respondents to the 1988 survey working full time two years after graduation was $40,400. This was slightly higher than the average annual salary ($37,400) of graduates with master's degrees or doctorates as a whole.

General picture

Over the past number of years, labour market entry possibilities for these graduates have been better than average. A high percentage of these graduates said they were satisfied with their educational choices.

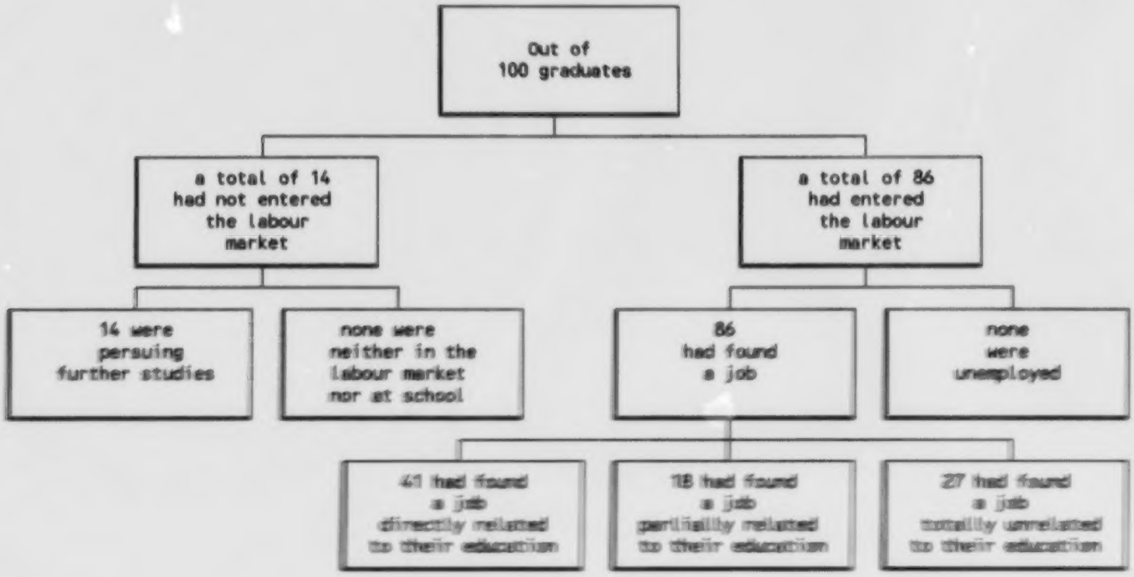
During the 1990s, job opportunities should remain about the same as they have been in the past number of years, despite the expected slower growth in the demand for teachers during the first half of the decade. Generally, this field of study should continue to offer better than average prospects.

NON-CLASSROOM TEACHING

BACHELOR'S DEGREE

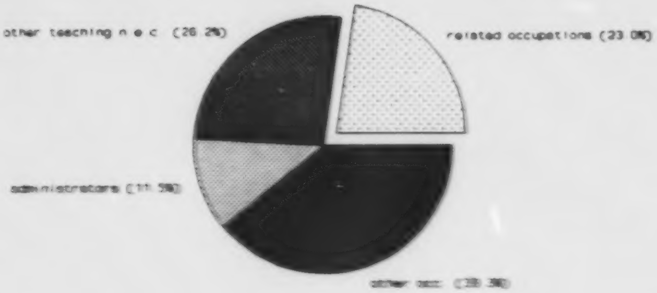
EDUCATION

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 14
had not entered
the labour
market
a total of 86
had entered
the labour
market
14 were
persuing
further studies
none were
neither in the
labour market
nor at school
86
had found
a job
none
were
unemployed
41 had found
a job
directly related
to their education
18 had found
a job
partially related
to their education
27 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	240	1.1	1.0
1985/90	235	0.9	1.0
1990/95	250	1.0	1.1
1995/2000	250	1.0	1.2

EDUCATION

NON-CLASSROOM TEACHING
BACHELOR'S DEGREE

This field of study encompasses several specialized disciplines such as educational and guidance counselling, school adjustment, remedial instruction and psychoeducation. Although not offered by all universities, the various specialties are available in several of them. The reader is referred to the university calendars for information on specific programs. There is generally no prerequisite other than a Diploma of Collegial Studies or equivalent.

Trends and projections

Since the late 1970s the number of graduates has varied from 200 to 300 annually. This number is expected to remain the same throughout the coming decade.

Occupation after graduation

A higher than average percentage of graduates were employed two years after graduation. Moreover, jobs were more closely related to education on average than among graduates with bachelor's degrees as a whole. Only a few graduates decided to pursue further studies.

Occupational profile

Nearly 40% of graduates employed two years after obtaining their degrees held professional positions in the social sciences, mainly as psychologists (23%) and social workers (10%). Teaching also provided openings, teaching of exceptional children accounting for 10% of positions.

Salary

In the 1988 survey of graduates, the salary ($19,900) of respondents working full time two years after graduation was 25% below the average for graduates with bachelor's degrees.

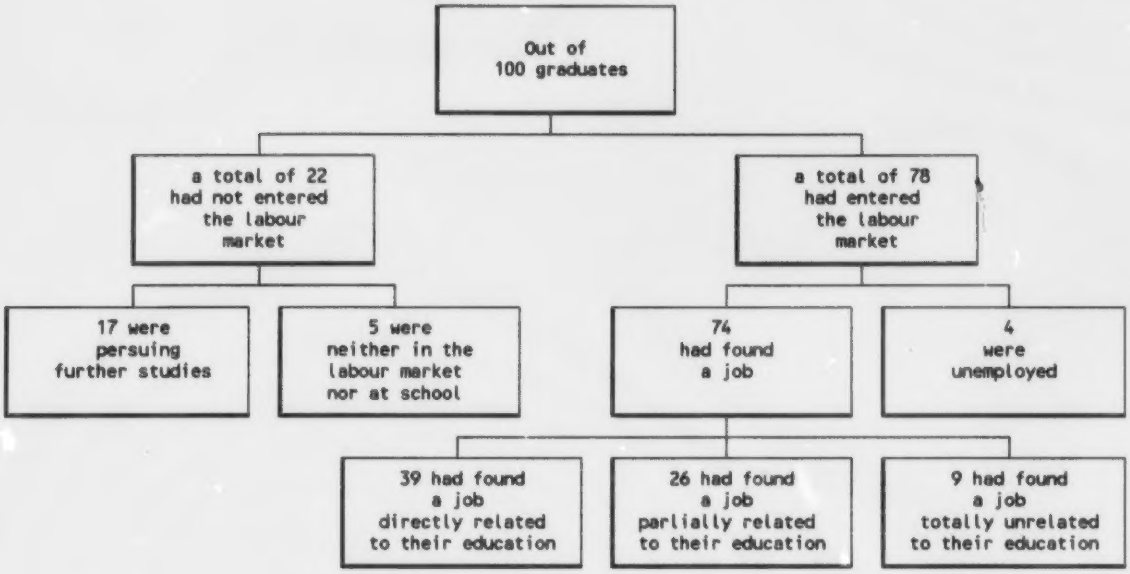
General picture

Graduates in this field of study seem to be able to enter the labour market more easily than graduates with bachelor's degrees taken as a whole, and their positions are generally related to their education. At the same time, however, salaries are lower than the average for graduates with equivalent qualifications. Lower salaries and often difficult working conditions are probably two reasons why few of these graduates would make the same academic choice (less than 50%).

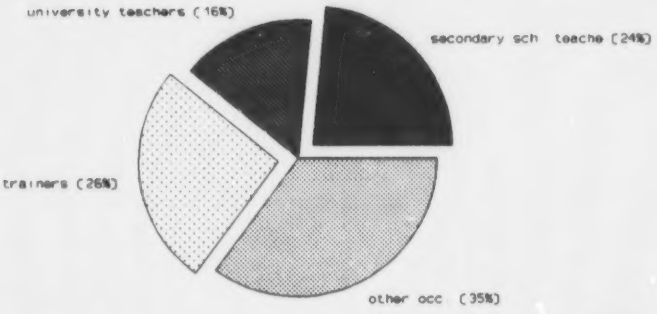
These graduates work mainly in occupational groups concentrated in the public and parapublic sectors. They are therefore vulnerable to the effects of governmental budget decisions. However, factors such as deinstitutionalization and rehabilitation of maladjusted youth should continue to maintain requirements over the coming decade.

PHYSICAL EDUCATION — EDUCATION
BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 22 had not entered the labour market
a total of 78 had entered the labour market
17 were persuing further studies
5 were neither in the labour market nor at school
74 had found a job
4 were unemployed
39 had found a job directly related to their education
26 had found a job parlially related to their education
9 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	645	2.9	---
1985/90	630	2.5	1.0
1990/95	650	2.2	2.0
1995/2000	650	2.5	2.1

PHYSICAL EDUCATION
BACHELOR'S DEGREE

This field of study encompasses the disciplines of physical activity, leisure activities and recreology. Most universities offer an undergraduate program in physical activity, but only the University of Quebec at Trois-Rivières and Concordia offer a program in leisure activities and recreology. Admission requirements vary from university to university, but biology, physics, chemistry and mathematics are generally prerequisites.

Trends and projections

The popularity of this field of study has remained constant over time since the late 1970s, while the different universities have on average granted between 2% and 3% of their degrees in this field. In the coming decade, an average of 650 graduates is expected annually, if the trends of the past few years continue.

Occupation after graduation

Access to the labour market for these graduates was slightly better than for graduates with bachelor's degrees taken as a whole. According to the 1988 survey of graduates, approximately 75% of these graduates were employed two years after graduation. In 65% of cases, respondents' jobs were at least partially related to their education. Because many jobs were available, fewer graduates than the average decided to pursue further studies.

Occupational profile

Graduates in these disciplines found jobs most frequently as secondary school teachers (45% of employed graduates). A not insignificant number (25%) worked as trainers.

Salary

In the 1988 survey of graduates, the average annual salary of respondents in these disciplines was $24,700. This salary level was slightly below the average for all graduates working full time, which was $26,600.

General picture

The labour market position of these graduates seems generally favourable, while placement results are slightly better than for graduates with bachelor's degrees taken as a whole. Approximately 73% would make the same academic choice if the occasion presented itself again, indicating a higher than average level of satisfaction.

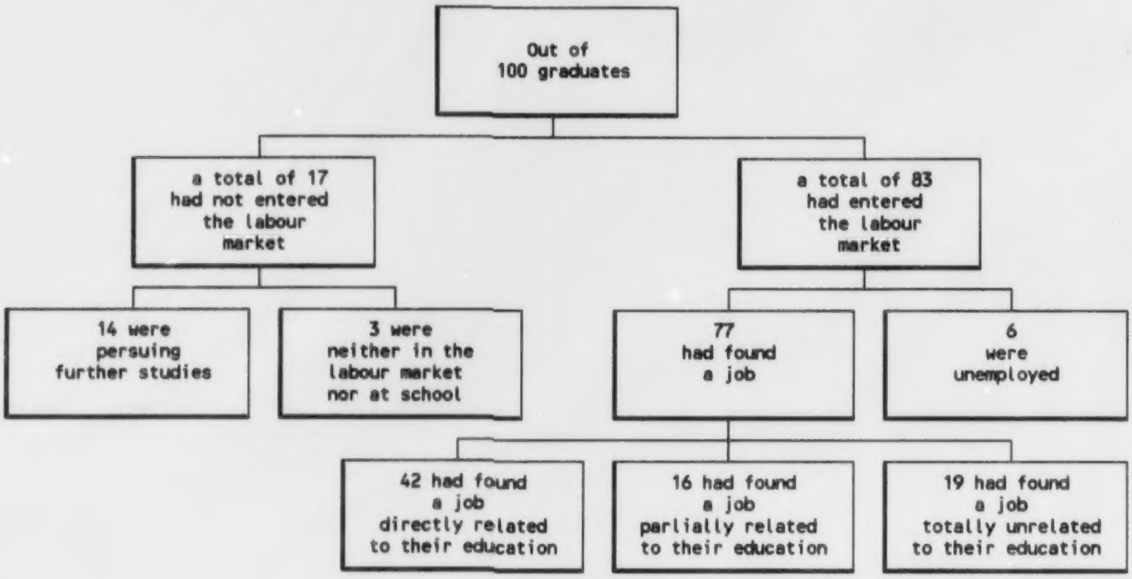
During the 1990s, the continued growth of popular leisure activities, especially training centres and health clubs, should mean that the labour market will continue to provide opportunities for these graduates.

EDUCATIONAL AND GUIDANCE SERVICES

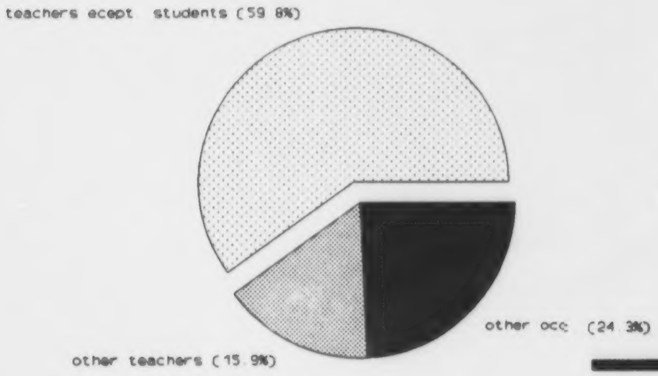
EDUCATION

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 17 had not entered the labour market
a total of 83 had entered the labour market
14 were persuing further studies
3 were neither in the labour market nor at school
77 had found a job
6 were unemployed
42 had found a job directly related to their education
16 had found a job parlially related to their education
19 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	640	4.3	0.8
1985/90	520	3.6	1.0
1990/95	450	3.6	1.0
1995/2000	470	3.6	1.0

EDUCATIONAL AND GUIDANCE SERVICES

VOCATIONAL COLLEGE DIPLOMA

All the regions except the Outaouais and the Montérégie offer a teaching program in special education technology.

Trends and projections

The number of graduates in this discipline dropped from 4.3 to 3.6% of the vocational college graduates in the second half of the 1980s.

Occupation after graduation

A slightly higher than average proportion of graduates had found a job after completing their studies. At the same time, the unemployment rate for these graduates was just under that for college graduates taken as a whole. A large number of the jobs obtained were directly related to education.

Occupational profile

In relation to university graduates in non-classroom teaching, the occupational profile of the college graduates was much more concentrated in the teaching groups, which comprised at least 75% of the positions held. Teachers of exceptional children alone accounted for 60% of the jobs obtained and daycare workers for 10%. A larger proportion of these jobs was in social organizations rather than schools. As for the other vocational technologies at the college level, the rest of the employed graduates were in a number of other less specialized groups associated primarily with office work and sales.

Salary

The average salary earned by respondents to the 1988 Relance Survey who were working full time one year after graduation was slightly lower than the average for the vocational college graduates taken as a whole, i.e. $15,200 annually compared to $17,800.

General picture

Given the high placement rate in occupations related to education, graduates in this field of training faced a clearly more favourable market than the average of the other college disciplines. It should be noted, however, that nearly 50% of the jobs held by these graduates were part time and that at least 45% of them were temporary, which explains the lower than average salary level.

Over the coming years, the drop in the school population should have some effect on the requirement growth for professionals working in the formal education sector. At the same time, the expansion of the daycare network and the less institutionalized approach towards groups with behavioural problems should continue to foster requirement growth in the social services sectors.

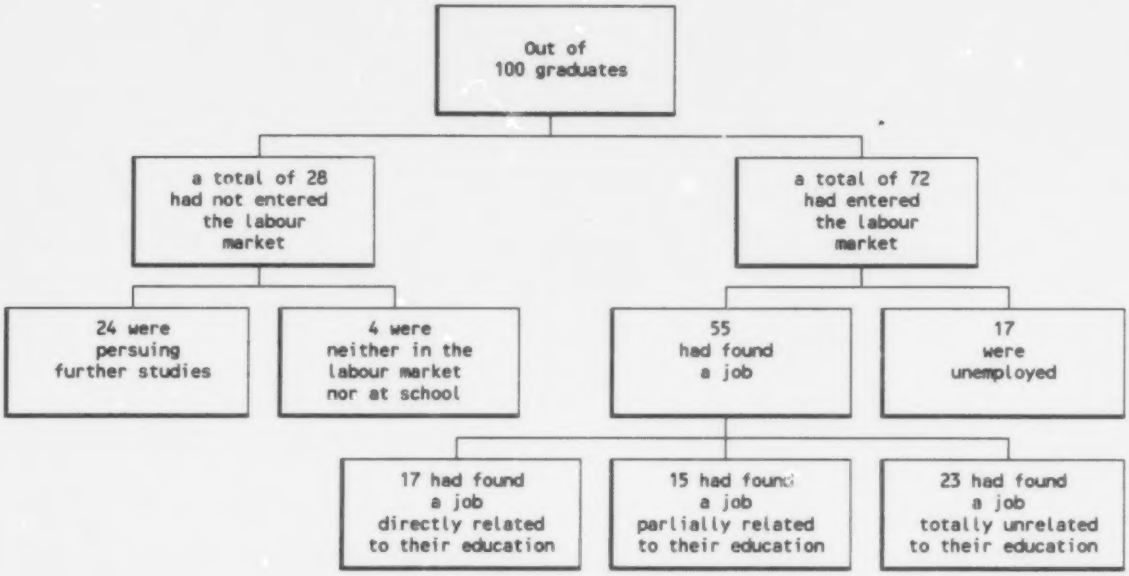
COMMERCE, MANAGEMENT AND ADMINISTRATION

COMMERCE

COMMERCE, MANAGEMENT AND ADMINISTRATION

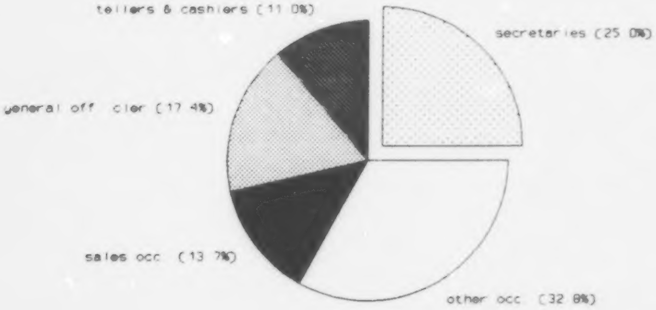
SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 28
had not entered
the labour
market
a total of 72
had entered
the labour
market
24 were
persuing
further studies
4 were
neither in the
labour market
nor at school
55
had found
a job
17
were
unemployed
17 had found
a job
directly related
to their education
15 had found
a job
partially related
to their education
23 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



**TRENDS IN NUMBER OF GRADUATES
AND MARKET OUTLOOK**

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	3330	11.3	0.3
1985/90	1110	9.6	1.0
1990/95	1105	11.7	1.0
1995/2000	1155	11.7	0.9

COMMERCE, MANAGEMENT AND ADMINISTRATION

COMMERCE

SECONDARY VOCATIONAL

This group of disciplines includes specialties related to sales and clerical work with the exception of secretarial studies.

Trends and projections

The popularity of these disciplines has closely followed the overall pattern of the secondary vocational sector, with the number of graduates dropping by almost half over the last decade. Yet, nearly 10% of all young people who enrol in the secondary vocational enter these programs.

Occupation after graduation

According to the Relance Survey, nearly 25% of the graduates in these disciplines chose to continue their studies immediately after graduation, representing a proportion well above the average. Graduates who entered the labour market experienced a success quite similar to the average in terms of placement since eight out of ten were employed during the first year. One worker in five, however, held a part-time job.

Occupational profile

Employed graduates were working in at least 50 occupational categories. The various groups of office employees accounted for about 60% of the jobs obtained. Among the most common jobs, were those of secretary (25%) and cashier (11%). The groups related to sales and service workers constituted the second largest categories with 14% and 11% of the jobs.

Salary

The average salary of graduates working full time was $11,100 one year after graduation.

General picture

Despite the bright employment outlook for office jobs, the jobs obtained did not appear to correspond to graduates' expectations. In fact, although 60% of graduates were working in this type of job, more than 40% of these graduates reported that their tasks were not related to their education. This dissatisfaction was apparent in the fact that a number of graduates chose to pursue their studies further.

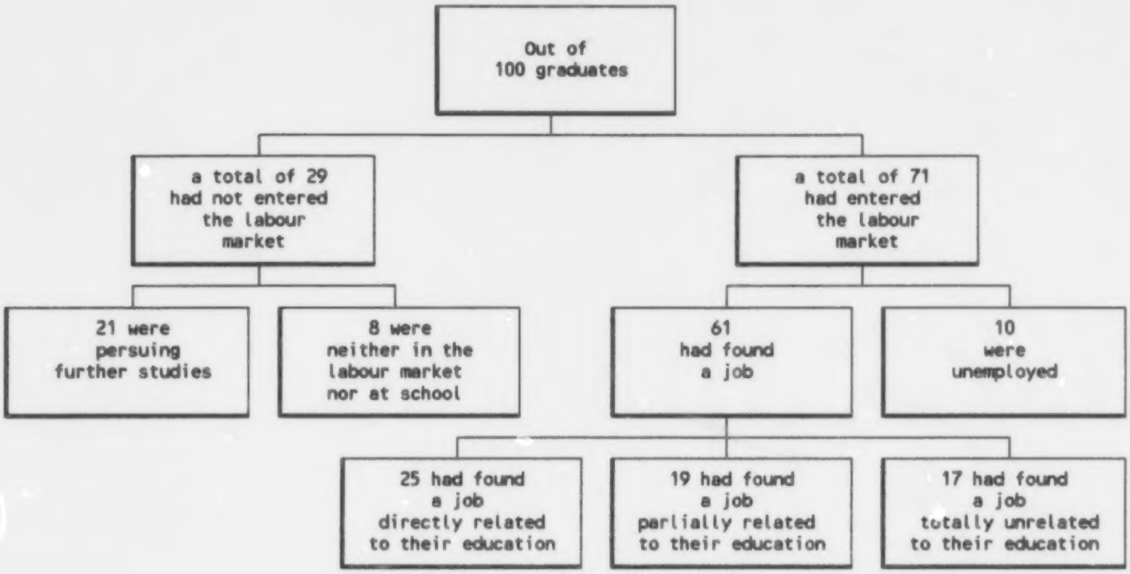
Employment conditions are expected to remain more or less the same over the next few years. Because of their number and the turnover rate associated with them, office jobs will continue to provide excellent employment opportunities. Candidates will nonetheless have to have a practical knowledge of increasingly ubiquitous computer equipment.

TABLE SERVICE

COMMERCE, MANAGEMENT AND ADMINISTRATION

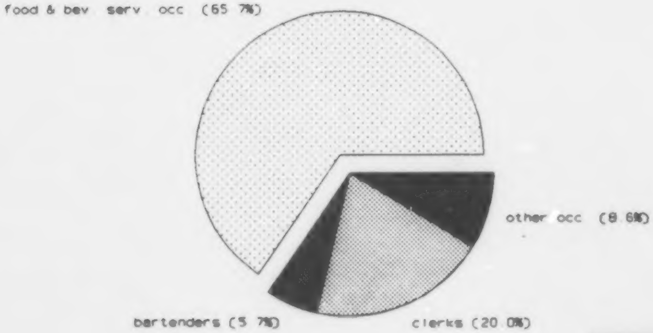
SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 29 had not entered the labour market
a total of 71 had entered the labour market
21 were persuing further studies
8 were neither in the labour market nor at school
61 had found a job
10 were unemployed
25 had found a job directly related to their education
19 had found a job partially related to their education
17 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	220	0.7	0.2
1985/90	70	0.6	1.0
1990/95	40	0.4	2.3
1995/2000	40	0.4	2.2

TABLE SERVICE

SECONDARY VOCATIONAL

This field of studies covers the main duties involved in proper food serving, including wine serving.

Trends and projections

Enrolment in these disciplines has more or less followed the same pattern as that of the secondary vocational sector taken as a whole, with the number of graduates dropping by nearly 70% during the 1980s.

Occupation after graduation

According to the 1988 Relance Survey, three out five graduates were employed one year after graduation. Given that an above-average proportion had decided to continue their studies, this employment rate translated into a placement rate of about 85%, which compares quite favourably to that of all the secondary vocational graduates. Seven out of ten graduates who were employed were working in a job that was in some way related to their training. However, more than one-third of these jobs were part time.

Occupational profile

Naturally, most of the related jobs were those of waiter and waitress. Other occupational categories open to these graduates in the food sector were those of barmen/women, receptionists and cashiers.

General picture

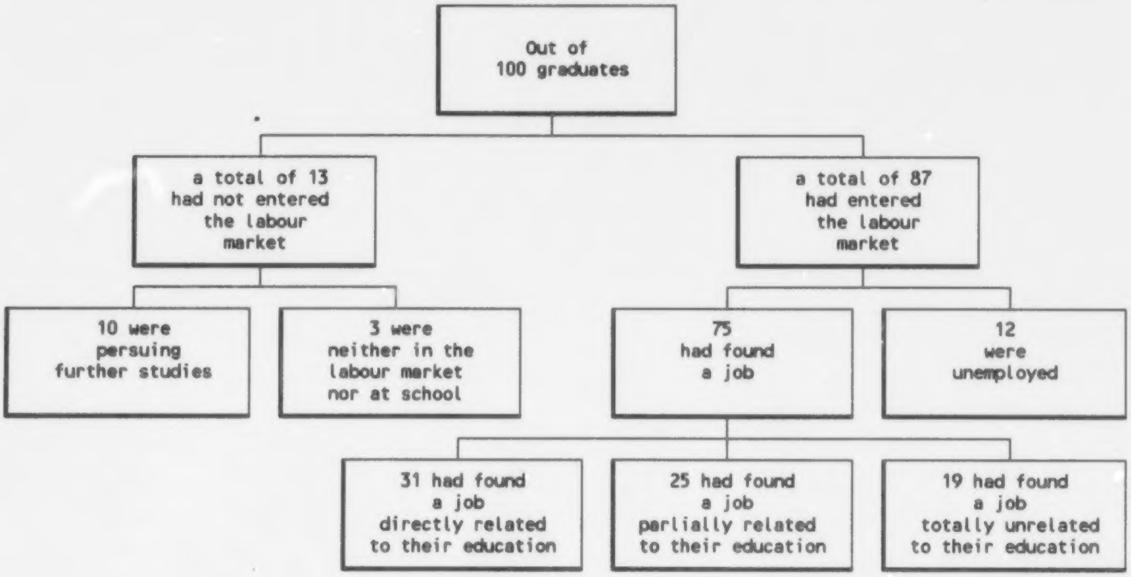
These graduates are enjoying a generally favourable labour market. Factors such as the growth of the restaurant sector, particularly of family restaurants, and high personnel turnover mean that numerous jobs are available throughout the year. Business hours and peak activity times during the day favour part-time work as well as evening and weekend work.

SECRETARIAL STUDIES AND DATA PROCESSING

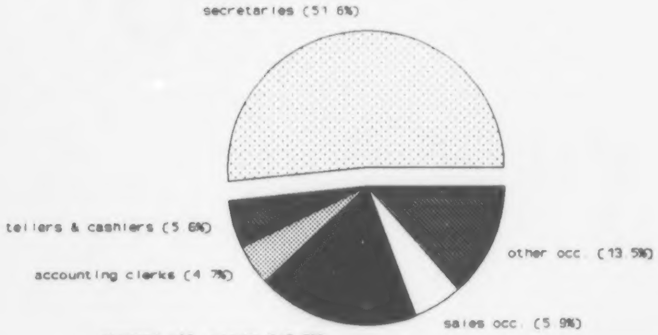
SECONDARY VOCATIONAL

COMMERCE, MANAGEMENT AND ADMINISTRATION

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 13 had not entered the labour market
a total of 87 had entered the labour market
10 were persuing further studies
3 were neither in the labour market nor at school
75 had found a job
12 were unemployed
31 had found a job directly related to their education
25 had found a job perlially related to their education
19 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	5745	19.4	0.2
1985/90	1665	14.4	1.0
1990/95	1650	17.5	1.0
1995/2000	1725	17.5	0.9

COMMERCE, MANAGEMENT AND ADMINISTRATION

SECRETARIAL STUDIES AND DATA PROCESSING

SECONDARY VOCATIONAL

This field of study includes the various specialties associated with secretarial studies and the operation of computer equipment.

Trends and projections

Despite the considerable drop in their enrolment during the 1980s, these disciplines are still the most popular with young people who enter secondary vocational programs. Nearly 15% of the secondary vocational diplomas awarded each year are in these disciplines.

Occupation after graduation

These graduates showed a high labour force participation one year after graduation. Nonetheless, a larger proportion of computer science graduates pursued their studies further. Nearly nine out of ten graduates in the labour force were employed one year after graduation. The unemployment rate of computer science graduates was therefore very similar to the average rate for secondary vocational graduates taken as a whole, i.e. 15%. According to those employed three quarters of the jobs were at least partially related to education. If the frequency of part-time work was average, temporary jobs were slightly more frequent (more than one job in five).

Occupational profile

Although half of the employed graduates were working as secretary-stenographers, the others held jobs in a large variety of occupations. The groups of office employees other than the secretarial group, of which the largest was that of bookkeepers and cashiers, accounted for another 30% of the jobs. Jobs in sales and services were also open to these graduates.

Salary

The average salary of these graduates when they were working full time was comparable to that of secondary vocational graduates taken as a whole, i.e. $13,500 the first year.

General picture

Secretarial training allows for occupational mobility within numerous office employee groups, which makes it easier for these graduates to enter the labour market. In this respect, the employment outlook for these graduates is brighter than in a number of smaller markets. The job opportunities for secretaries, the occupation that is specifically sought by these graduates, are subject to strong competition from college-level graduates in secretarial studies who enter the market in proportionally higher numbers.

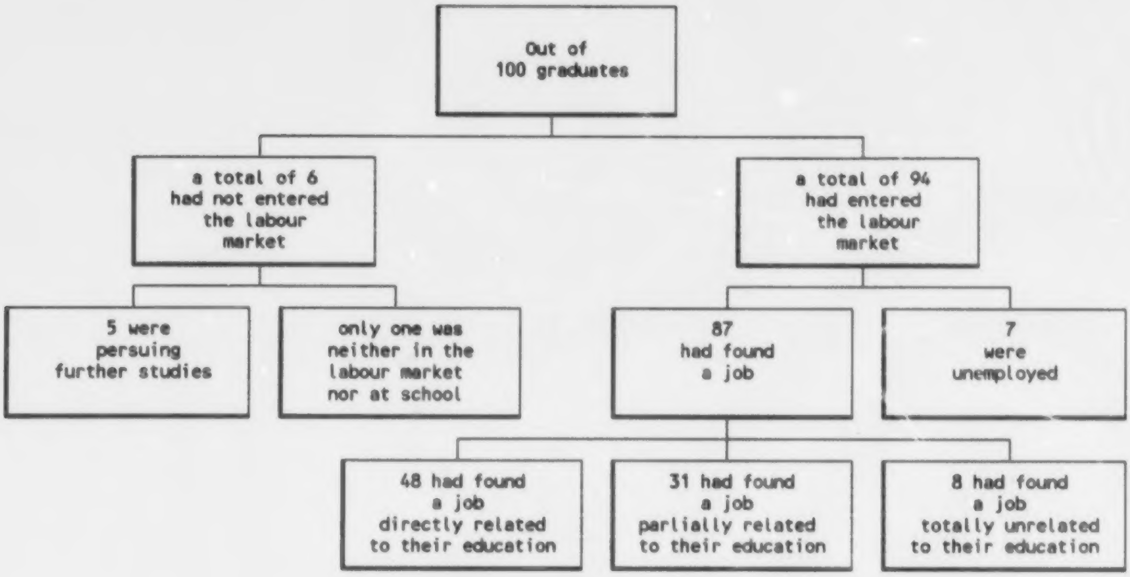
Over the next few years, this training is expected to continue providing a great deal of job openings given the opportunities for employment growth and the large number of office jobs.

SECRETARIAL TECHNOLOGY

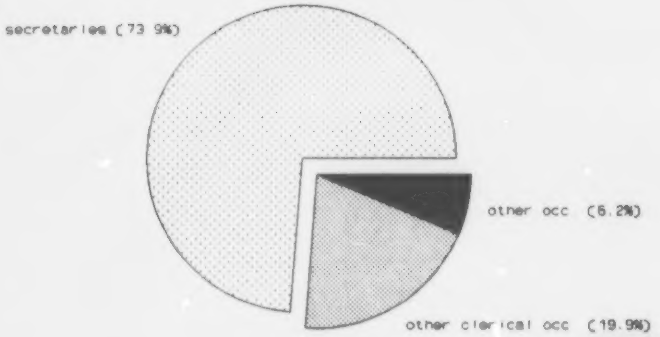
VOCATIONAL COLLEGE DIPLOMA

COMMERCE, MANAGEMENT AND ADMINISTRATION

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 6 had not entered the labour market
a total of 94 had entered the labour market
5 were persuing further studies
only one was neither in the labour market nor at school
87 had found a job
7 were unemployed
48 had found a job directly related to their education
31 had found a job partially related to their education
8 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	1400	9.5	1.2
1985/90	1345	9.4	1.0
1990/95	1215	9.6	1.0
1995/2000	1265	9.6	0.9

COMMERCE, MANAGEMENT AND ADMINISTRATION

SECRETARIAL TECHNOLOGY
VOCATIONAL COLLEGE DIPLOMA

Training in this field is available in almost all Quebec regions.

Trends and projections

The growth in the number of graduates in this discipline has been very similar to the increase in the number of vocational college graduates. This is one of the most popular disciplines, accounting on average for 10% of the vocational college students who graduate each year.

Occupation after graduation

With a labour market participation rate of approximately 94%, graduates in this discipline are among the most active. This high participation rate is accompanied by a high placement rate since more than 90% of the employed graduates held a job one year after graduation. The jobs obtained were also more frequently and more directly related to education than those obtained by their colleagues in other college disciplines. The jobs were full time and permanent for the most part.

Occupational profile

The occupational profile of employed graduates one year after graduation is a good reflection of the close relation between education and work. Nearly 75% of the graduates were working as secretaries and another 20% performed various office tasks.

Salary

An average annual income of $14,500 reported by graduates who were working full time one year after completing their studies was 20% lower than the average income of college graduates taken as a whole.

General picture

The placement outlook for jobs directly related to education is one of the best compared to the different training programs at the college level. The rapid growth of office technology has had the effect of eliminating a large number of repetitive tasks and giving rise to more varied tasks requiring a better knowledge of work organization. As secretarial tasks have become more complex, employers' requirements have tended to grow. This has had the effect of favouring secretarial candidates to the detriment of those who are more oriented towards typing or journal entry tasks.

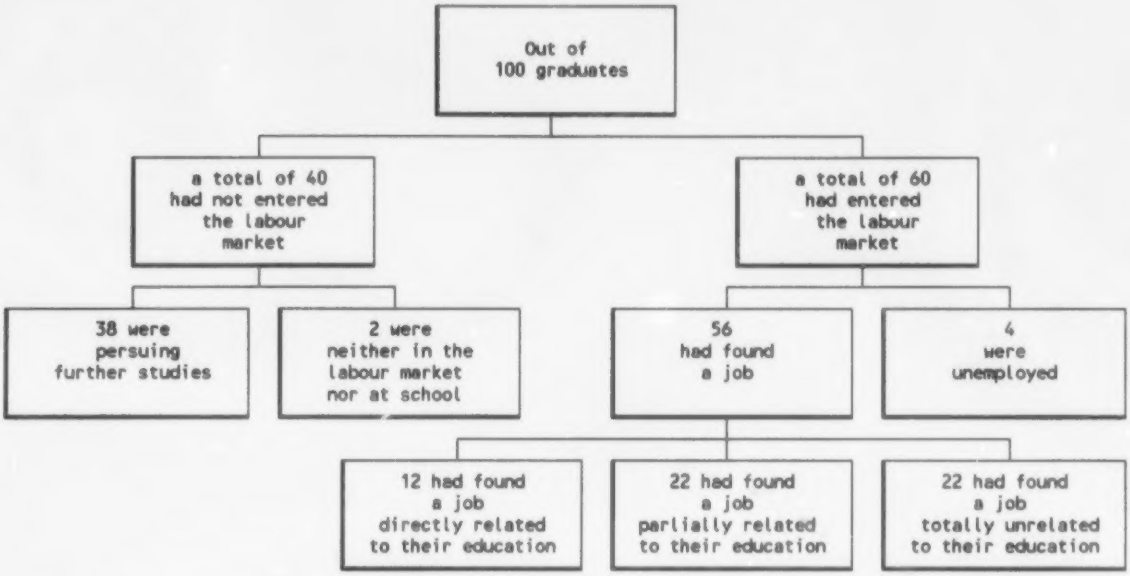
Over the next decade, employment prospects for these graduates should remain better than average even if the demand grows at a slightly slower rate than in past years.

BUSINESS ADMINISTRATION

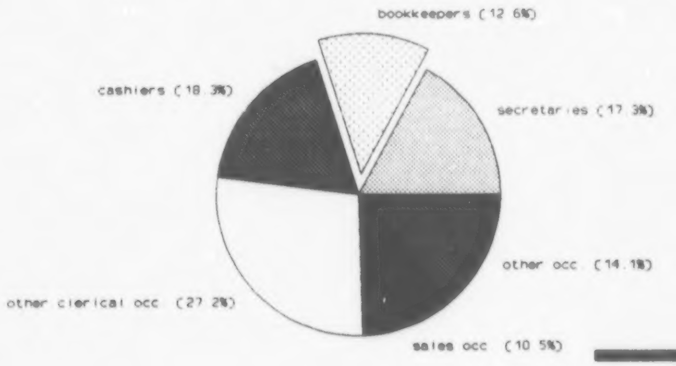
VOCATIONAL COLLEGE DIPLOMA

COMMERCE, MANAGEMENT AND ADMINISTRATION

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 40 had not entered the labour market
a total of 60 had entered the labour market
38 were persuing further studies
2 were neither in the labour market nor at school
56 had found a job
4 were unemployed
12 had found a job directly related to their education
22 had found a job parlially related to their education
22 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	330	2.1	0.8
1985/90	480	3.2	1.0
1990/95	430	3.4	1.2
1995/2000	445	3.4	1.1

COMMERCE, MANAGEMENT AND ADMINISTRATION

BUSINESS ADMINISTRATION

VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses the general business administration and business administration and cooperative movement technologies. These disciplines are offered in most Quebec regions except Abitibi, North Shore and Estrie.

Trends and projections

The number of graduates in these disciplines has remained more or less constant over the past decade. Given the expected drop in the college population over the next ten years, the number of graduates could decrease by about 10% if this discipline maintains its relative importance.

Occupation after graduation

According to the 1988 Relance Survey conducted by the Department of Education, a much higher proportion of respondents in this field chose to continue their studies one year after graduation than the average of vocational college graduates taken as a whole. This situation contrasted with the encouraging placement results noted among graduates who decided to enter the labour market. In fact, the placement rate for these graduates reached 93% compared to an average of 80% for the other graduates. However, only 60% of employed graduates considered their duties to be at least partially related to their education, a lower proportion than the 80% for their colleagues in other disciplines.

Occupational profile

The occupational profile of employed graduates one year after completing their degree clearly shows that clerical jobs provided the means of entry into the labour market. Middle management positions were to all intents and purposes absent from their occupational profile. Thus, 75% of the jobs obtained were in this category and the main groups represented were those of cashiers, bookkeepers and office employees.

Salary

The average salary of respondents to the survey was $14,500 annually.

General picture

The employment outlook is generally excellent for those graduates who are willing to acquire experience in the labour market in jobs that do not immediately present management challenges. The high proportion of those who decide to continue their studies clearly shows that a number of these graduates had higher short-term expectations. In this respect, the placement results of the university graduates indicate that middle management positions are more easily accessible to graduates with bachelor's degrees.

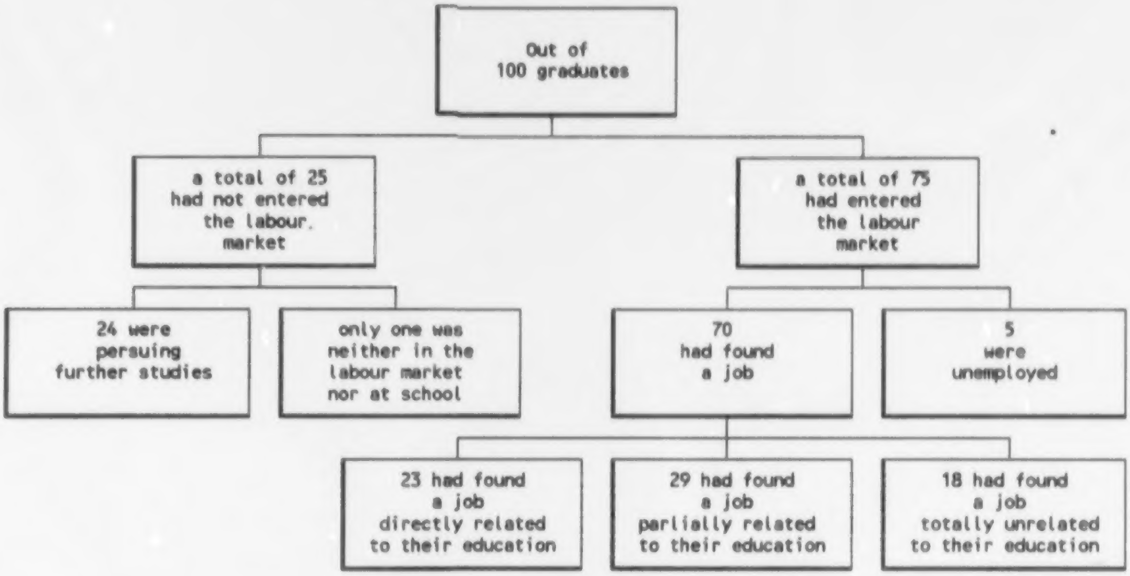
Over the next few years, the number of employment opportunities for these graduates will continue to be higher than average but under the same conditions as those that prevailed over the past few years. In the medium and long terms, middle management positions will remain accessible to those who have proved their abilities.

FINANCIAL MANAGEMENT

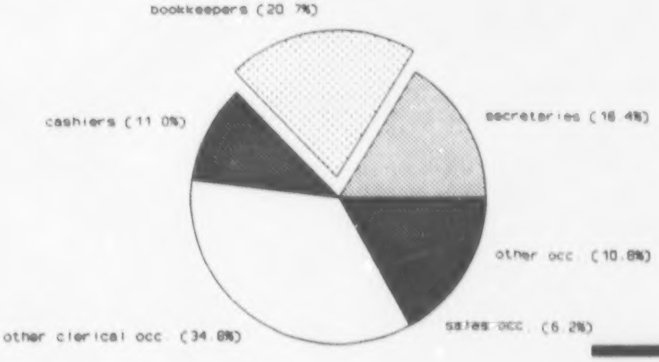
VOCATIONAL COLLEGE DIPLOMA

COMMERCE, MANAGEMENT AND ADMINISTRATION

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 25 had not entered the labour market
a total of 75 had entered the labour market
24 were persuing further studies
only one was neither in the labour market nor at school
70 had found a job
5 were unemployed
23 had found a job directly related to their education
29 had found a job parlially related to their education
18 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	1500	9.9	0.5
1985/90	1370	9.5	1.0
1990/95	1230	9.7	1.3
1995/2000	1280	9.7	1.1

COMMERCE, MANAGEMENT AND ADMINISTRATION

FINANCIAL MANAGEMENT

VOCATIONAL COLLEGE DIPLOMA

This study program is offered by a large number of institutions and is available in each of the 12 Quebec regions.

Trends and projections

With nearly 10% of the vocational sector graduates at the college level, this field of training is one of the most popular. Its relative importance has remained more or less constant during the 1980s, while the number of graduates grew at the same pace as that of the whole. The declining population in the age category closest to the college population could cause the number of graduates to fall by 10% towards the end of the 1990s.

Occupation after graduation

As for general administration technology, the placement rate for graduates who entered the labour market at the end of their studies was 93%, a higher than average level. The relation between education and work, although weaker than the average, was stronger than that noted in the marketing or general administration specialties. As in the other college-level business administration disciplines, a sizeable proportion of graduates decided to continue their studies after obtaining their diploma.

Occupational profile

More than 80% of graduates who were employed one year after graduation were working as clerks. The main occupational groups were those of bookkeepers and cashiers, accounting for 30% of the jobs obtained. Middle management positions were held by few graduates and did not constitute entry jobs but rather positions accessible in the medium or long term in the course of a career.

Salary

The average annual salary of respondents to the 1988 Relance Survey who were working full time was $14,200, a level more or less comparable to the average of graduates in business administration disciplines at the college level.

General picture

These graduates have an excellent chance of entering the labour market upon completion of their studies. Candidates must however accept clerical positions initially and then aspire to positions within the company that carry greater responsibility. Faced with this situation, an appreciable number of graduates opt to continue their studies.

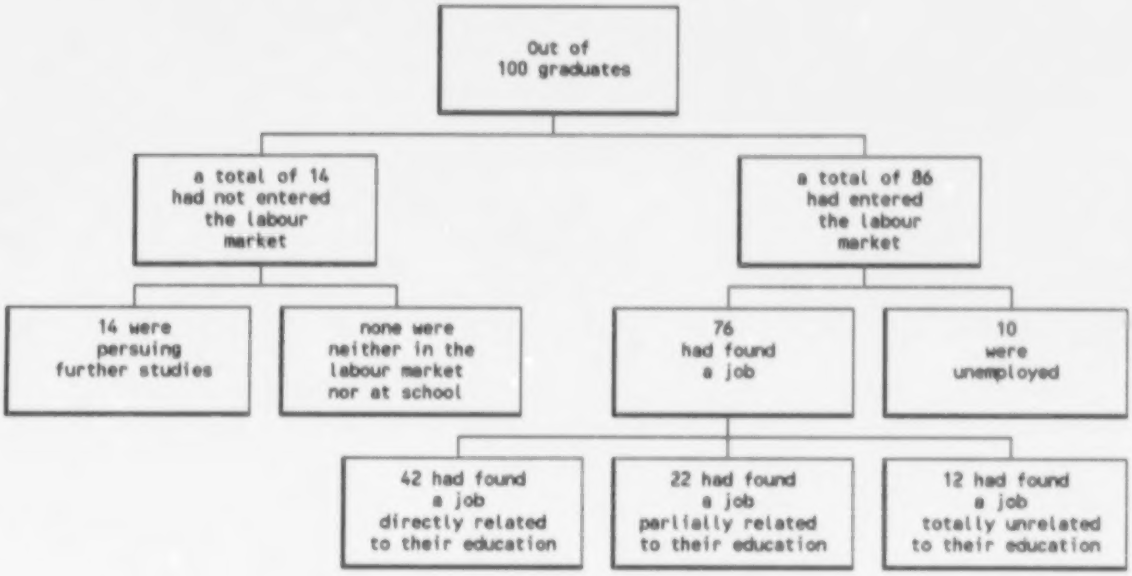
Over the next few years, the labour market will continue to offer good employment opportunities. As in the recent past, entry-level jobs will increasingly include clerical duties, but the career outlook for middle management positions will remain good over the longer term.

INSTITUTIONAL MANAGEMENT

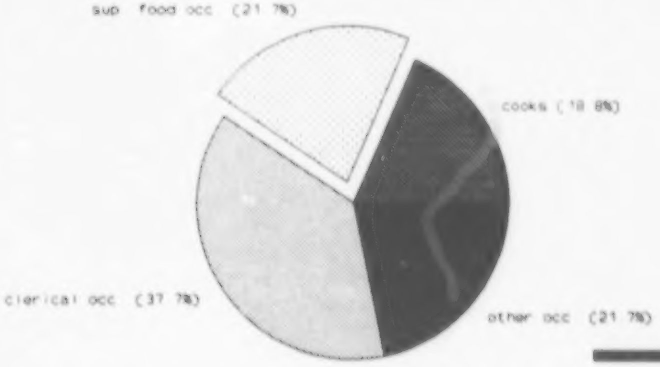
VOCATIONAL COLLEGE DIPLOMA

COMMERCE, MANAGEMENT AND ADMINISTRATION

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 14 had not entered the labour market
a total of 86 had entered the labour market
14 were persuing further studies
none were neither in the labour market nor at school
76 had found a job
10 were unemployed
42 had found a job directly related to their education
22 had found a job partially related to their education
12 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	80	0.5	0.9
1985/90	110	0.8	1.0
1990/95	100	0.8	1.2
1995/2000	105	0.8	1.2

COMMERCE, MANAGEMENT AND ADMINISTRATION

INSTITUTIONAL MANAGEMENT

VOCATIONAL COLLEGE DIPLOMA

This program encompasses the hotel business and food production and administration specialties. The Institut de tourisme et d'hôtellerie du Québec (ITHQ) offers programs of study in both specialties while Lasalle College offers training in the hotel business. These two institutions are located in Montreal.

Trends and projections

About 100 students have graduated annually over the past few years. The volume of graduates is expected to remain at this level during the next decade.

Occupation after graduation

Compared to graduates in general business administration, financial management and marketing technologies, a large proportion of these graduates entered the labour market after completing their studies. Despite an unemployment rate which was higher than the average for graduates in any of the other management disciplines taken as a whole, an appreciable number of graduates were employed and, for the most part, held jobs that were at least partially related to their education. Note also that the large majority of the jobs obtained were permanent and full time.

Occupational profile

The three occupational groups of food-services supervisors, chefs and cooks as well as receptionists and telephone operators accounted for an almost equal share of 60% of the positions held by graduates in institutional management. The group of sales representatives also provided a significant number of openings since more than 10% of 1987 graduates were so employed according to the 1988 Relance Survey. This occupational profile differs from that of other business administration disciplines in that the clerical groups are rarely encountered.

Salary

The average annual salary of respondents to the survey who were working full time was $14,900.

General picture

Over the last decade, graduates in institutional management benefited from the extensive development of the tourist infrastructures and the growth of the food service sector. For these reasons, graduates in institutional management were less adversely affected by the 1981-82 recession than gradates in other college disciplines. Despite the slightly higher than average unemployment rate, job opportunities in education-related occupations remained just above average. Moreover, compared to other management disciplines, this discipline offers distinctly better chances of entering the labour market in the short term.

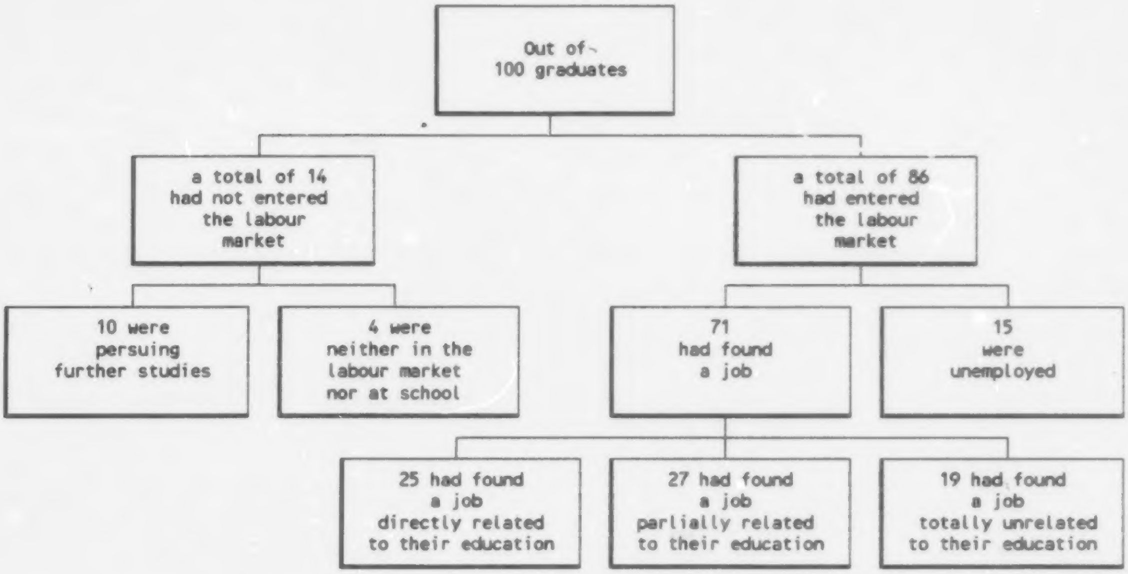
In the coming years, the factors which have sustained the requirement growth over the last few years will continue to exert an influence. Overall, the employment outlook is expected to remain much the same as that of recent years.

OTHER MANAGEMENT SERVICES

VOCATIONAL COLLEGE DIPLOMA

COMMERCE, MANAGEMENT AND ADMINISTRATION

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of-
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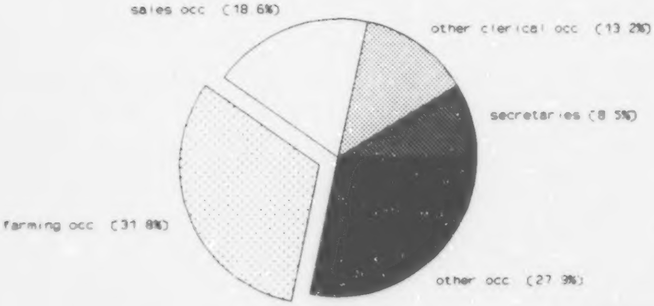
to their education
27 had found
a job
parlially related
to their education
19 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

**TRENDS IN NUMBER OF GRADUATES
AND MARKET OUTLOOK**

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	250	2.6	---
1985/90	280	1.9	---
1990/95	210	1.7	---
1995/2000	220	1.7	---

This field of training encompasses disciplines related to farm management and operation, personnel management, transportation management and industrial management.

Trends and projections

Over the last decade the number of graduates in this field of training has increased more slowly than for all the other vocational college disciplines. This drop in popularity can be mainly attributed to disciplines linked to the operation of farming enterprises whose graduates have stabilized in number. During the next few years, rather unfavourable demographic pressures should translate into a slight decline in the number of graduates in this field of study. If the decrease in popularity of the last few years continues, the number of graduates could see a more substantial drop than that indicated by the data given on the preceding page.

Occupation after graduation

One year after completing their studies, graduates in these disciplines entered the labour market in proportionally greater numbers. Nonetheless, they experienced more difficulty in obtaining jobs and their unemployment rate was 11.6% compared to an average of 8.5% for vocational college graduates. The relation between education and work, however, was less direct than average and in this sense could be compared to other management disciplines at the college level.

Occupational profile

The occupational groups of farm labourers provided the most employment opportunities, accounting for 30% of the jobs obtained. With 12% and 8% of the jobs respectively, the occupations of dairy-farm workers and farm labourers were the principal means of entry into the labour market. As in all other management disciplines at the college level, clerical jobs and sales-related jobs also provided a popular means of entry into the labour market.

Salary

The average salary of respondents to the survey who were working full time after completing their studies was $14,800 annually, a slightly lower level than the annual average of $17,700 earned by vocational college graduates taken as a whole.

General picture

As for all other management disciplines at the college level, the entry-level jobs that are immediately accessible to these graduates are primarily jobs with few management responsibilities, i.e. farm workers in the case of farm management graduates and clerks and salespersons for the other disciplines. Nonetheless, there are very real possibilities for promotion in the longer term since management positions are often filled by human resources available within the company. Knowledge acquired through work experience associated with lower-level jobs confers a marked advantage over less qualified candidates.

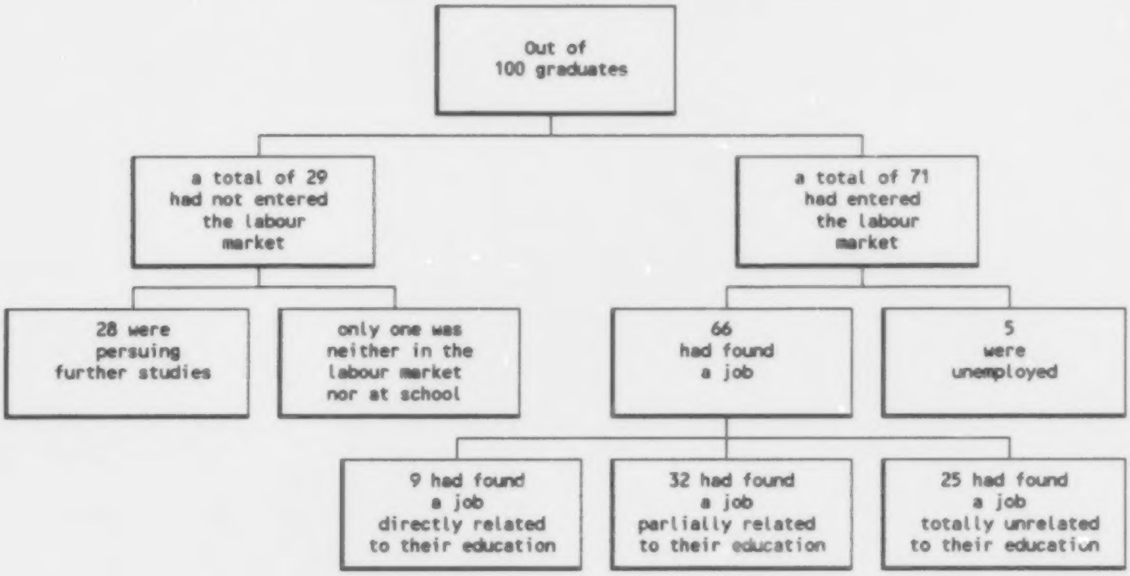
In the coming years, expected growth in labour force supply and demand in the agricultural sector is such that there could be a shortage of farmers. One of the main difficulties which candidates must face, however, is that today they can hardly afford to set up a farming enterprise on their own due to the enormous costs involved.

MARKETING

COMMERCE, MANAGEMENT AND ADMINISTRATION

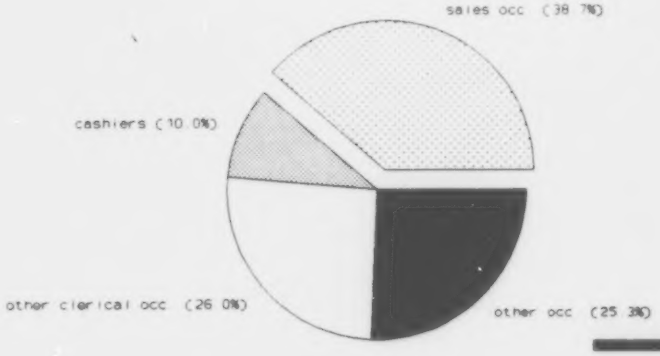
VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 29 had not entered the labour market
a total of 71 had entered the labour market
28 were persuing further studies
only one was neither in the labour market nor at school
66 had found a job
5 were unemployed
9 had found a job directly related to their education
32 had found a job parlially related to their education
25 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	290	1.8	---
1985/90	325	2.2	1.0
1990/95	285	2.2	0.5
1995/2000	295	2.2	0.5

COMMERCE, MANAGEMENT ADMINISTRATION

MARKETING

VOCATIONAL COLLEGE DIPLOMA

Training in marketing technology is available in almost all Quebec regions, with the exception of the North Shore, Gaspé and Outaouais regions.

Trends and projections

The number of graduates in this discipline has grown at a slightly faster than average rate over the last decade. Its relative importance thus rose from 1.8% in the first half of the 1980s to 2.2% in the second half. Owing to the smaller population of young people, the annual number of graduates should fall by about 10% during the next few years.

Occupation after graduation

As with the general business administration disciplines, a large number of marketing students continued their studies after graduation. This situation has a lot to do with the fact that a clearly lower than average proportion of graduates indicated that their jobs were directly related to their education. In spite of this, the placement of candidates who decided to enter the labour force compared favourably to that of other disciplines at the same level.

Occupational profile

As for the other categories of college-level management graduates, the occupational profile of the graduates who were employed one year after completing their studies was dominated by the groups of clerks and salespersons, which together accounted for at least 80% of the jobs. However, the occupational profile differed in that the salespersons groups were ahead of the clerical groups.

Salary

Of all the college-level management disciplines, graduates specializing in marketing had the highest average salary one year after graduation, with $16,500 annually.

General picture

The labour market offered good employment opportunities for college marketing graduates. The jobs obtained by the graduates, however, fell short of their expectations. As for university marketing graduates, sales jobs provided the most openings. However, while university graduates obtained jobs as sales executives and sales representatives, college graduates found jobs as salespersons and sales clerks.

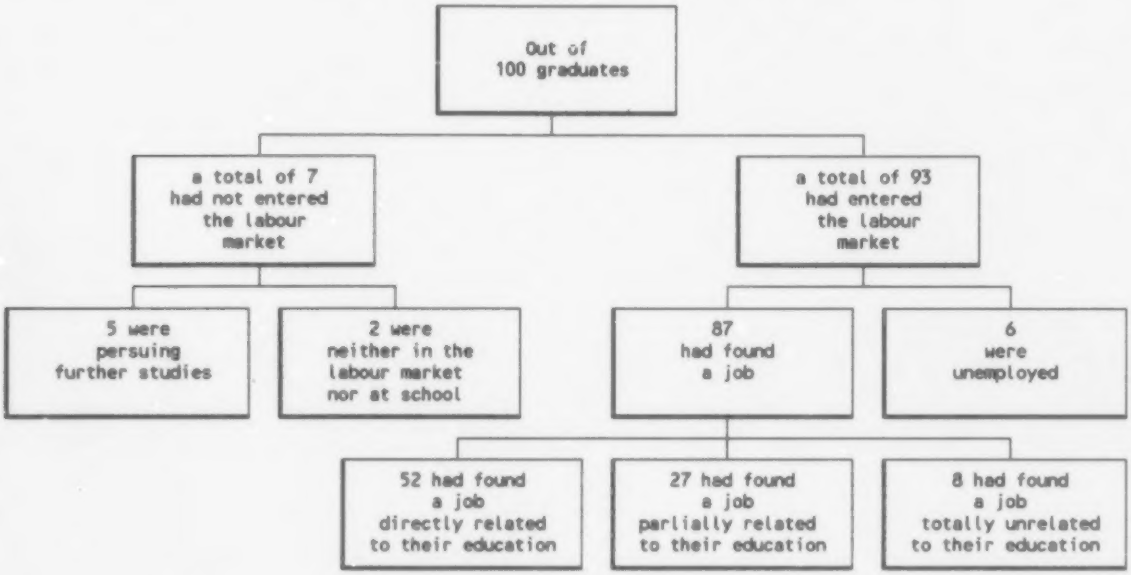
Over the next few years, occupations in sales will continue to offer good employment opportunities. The qualifications required for a large number of these jobs will tend to grow as salespersons become increasingly responsible for planning, customer service and after-sales service.

COMMERCE AND MANAGEMENT

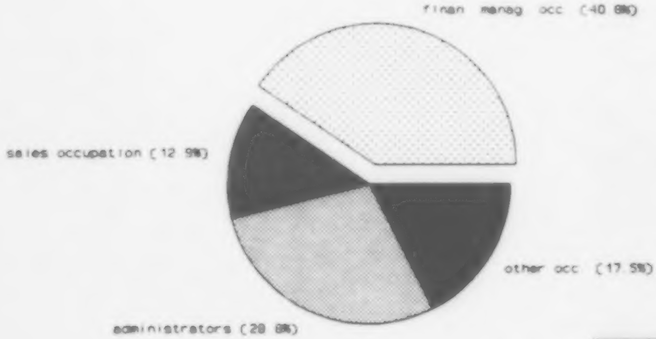
COMMERCE, MANAGEMENT AND ADMINISTRATION

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 7 had not entered the labour market
a total of 93 had entered the labour market
5 were persuing further studies
2 were neither in the labour market nor at school
87 had found a job
6 were unemployed
52 had found a job directly related to their education
27 had found a job partially related to their education
8 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	4180	18.9	1.2
1985/90	4871	19.7	1.0
1990/95	5000	19.6	0.9
1995/2000	5075	19.7	0.9

COMMERCE, MANAGEMENT AND ADMINISTRATION

COMMERCE AND MANAGEMENT

BACHELOR'S DEGREE

This broad field of study comprises disciplines such as accounting, finance, personnel management, labour relations, health services administration, public administration and other administrative specialties. Most Quebec universities offer specialized programs in these various disciplines. Prerequisites vary depending on educational institution and discipline, but advanced college mathematics courses are usually required.

Trends and projections

The popularity of the various administrative disciplines has grown steadily over the 1980s. From 13.5% in 1977, the number of graduates in this category as a percentage of all graduates with bachelor's degrees rose to 16% in 1980 and 20% in 1989. In absolute terms, this trend represents a rise of nearly 90% in the number of graduates in administration over the last ten years. If current trends continue, an estimated annual average of 5,000 students will graduate in this field of study over the next ten years.

Occupation after graduation

The vast majority of graduates in administrative disciplines enter the labour market. At the same time, a small percentage of them continue their education immediately after graduation. This high participation rate is coupled with an employment rate markedly higher than the average for graduates with bachelor's degrees in other disciplines. More than 85% of these graduates were employed two years after graduation compared with 67% for graduates with bachelor's degrees taken as a whole. Moreover, their jobs were generally more directly and more frequently related to their education than the average.

Occupational profile

The occupational profile of these graduates two years after graduation reflects clearly the close link between education and work. Nearly 70% of employed graduates were working as administrators. In this respect, the largest occupational group remained, according to the 1988 survey of graduates, that of financial officers (40%), which includes accountants. Sales managers also accounted for a sizeable group with 10% of jobs. Besides administrators, sales occupations offered opportunities, especially as sales representatives.

Salary

The average salary of graduates working two years after graduation was $26,500 annually in 1988. This is comparable to the average salary of graduates with a bachelor's degree taken as a whole.

General picture

The labour market offers these graduates some of the best job entry possibilities. In addition, it provides excellent opportunities for jobs directly related to education, while offering salary conditions comparable to those enjoyed on average by other graduates with equivalent qualifications.

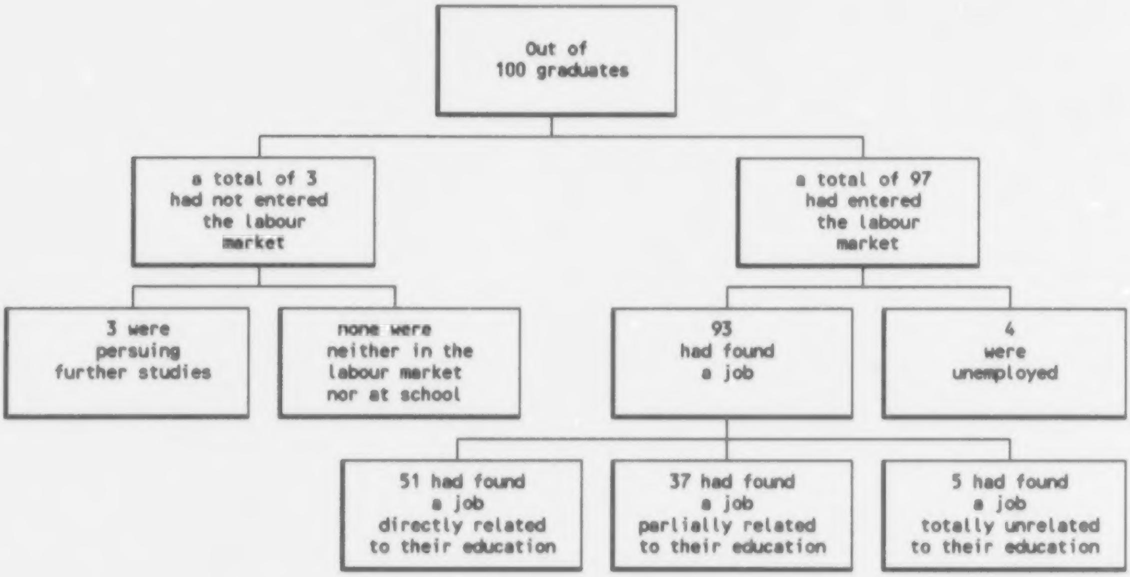
During the coming years, the labour market in occupations in this field of study is likely to continue to hold out very good prospects. Overall, demand for managers is expected to exceed the supply of qualified candidates.

COMMERCE AND MANAGEMENT

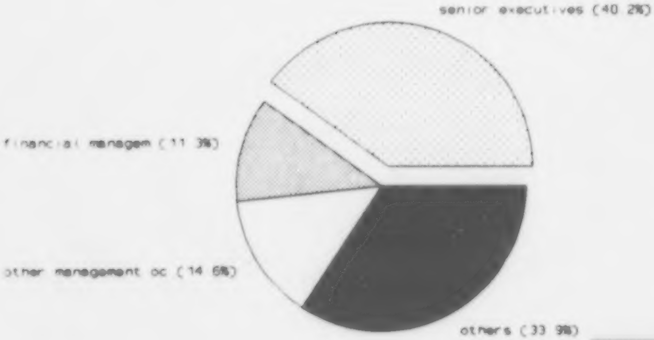
MASTER'S DEGREE AND DOCTORATE

COMMERCE, MANAGEMENT AND ADMINISTRATION

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 3
had not entered
the labour
market
a total of 97
had entered
the labour
market
3 were
persuing
further studies
none were
neither in the
labour market
nor at school
93
had found
a job
4
were
unemployed
51 had found
a job
directly related
to their education
37 had found
a job
parlially related
to their education
5 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

**TRENDS IN NUMBER OF GRADUATES
AND MARKET OUTLOOK**

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	800	19.4	1.1
1985/90	900	17.8	1.0
1990/95	810	17.1	1.0
1995/2000	740	17.1	1.1

COMMERCE AND MANAGEMENT
MASTER'S DEGREE AND DOCTORATE

Concordia, Laval, McGill, Montréal (HEC), Sherbrooke and the various campuses of the University of Quebec offer a wide range of programs in management, accounting, business and taxation. Specialized programs in health care administration (University of Montréal) and public administration (ENAP) are also available.

Trends and projections

The popularity of this discipline among graduate students reached a peak in the mid-1980s, when more than 20% of master's degrees and doctorates were in this field. The percentage dropped gradually to approximately 17% in 1989. We anticipate that the proportion will remain constant during the 1990s. Given the demographic drop in university students at this level, the average number of graduates should drop by about 100 between 1990 and 2000. Nevertheless, this field of study will continue to account for the greatest number of graduates, with about 750 to 800 annually.

Graduates' labour market participation

According to the 1988 survey, these graduates were among those most likely to enter the labour market, their participation rate being 97%. They were also among the luckiest as regards placement, since barely 4% were unemployed at the time of the survey. Nearly 90% of jobs held were at least partly related to education, a rate higher than the average for university graduates.

Occupational profile

Despite the close link between education and work, the occupational profile of these graduates was varied: 65% worked in management, including 20% as financial officers or managers. Among the others, occupational categories in the natural sciences and engineering accounted for 11% of graduates; workers in the social sciences, 8%; and teachers, 3%.

Salary

The average annual salary of graduates who responded to the survey and who were working full time was $48,100. This was 25% greater than that of graduates with master's degree and doctorates as a whole.

General picture

The statistics show above average placement and salaries for graduates in this field of study two years after graduation. As suggested by the wide variety of occupations, many graduates probably had significant labour market experience, making access to management positions easier for them. Consequently, they are in a favourable labour market position.

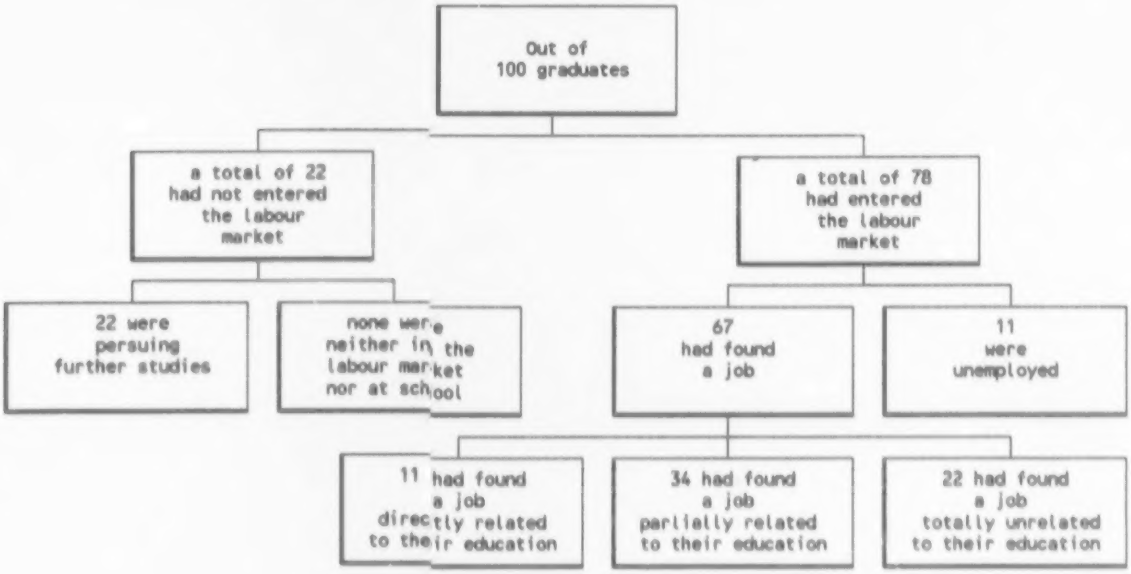
For these reasons and given the expected trends in management requirements, job opportunities for these graduates should remain above average in the coming years.

HUMANITIES

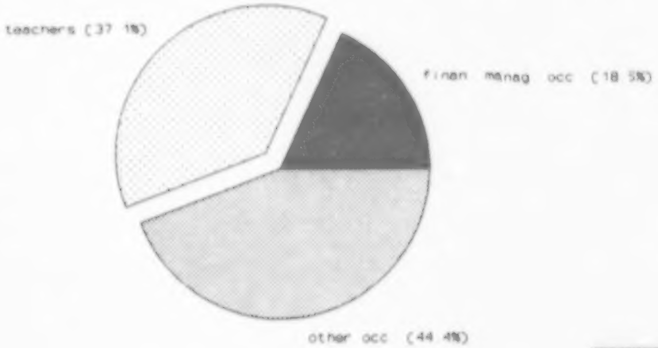
ENGLISH
BACHELOR'S DEGREE

HUMANITIES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 22 had not entered the labour market
a total of 78 had entered the labour market
22 were persuing further studies
none were neither in the labour market nor at school
67 had found a job
11 were unemployed
11 had found a job directly related to their education
34 had found a job partially related to their education
22 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	290	1.3	0.3
1985/90	360	1.5	1.0
1990/95	375	1.5	0.9
1995/2000	375	1.5	0.9

ENGLISH
BACHELOR'S DEGREE

The study of the English language, its linguistic rules, literature and conventions of literary creativity comprise the core of the English literature program. Bishop's, Concordia, Laval, McGill, Montréal and Sherbrooke universities all offer an English literature program. There is generally no prerequisite, but students must demonstrate an advanced knowledge of the English language.

Trends and projections

The popularity of this field of study has remained constant over the past few years, and an average of 300 to 400 students have obtained bachelor's degrees in it each year. Approximately the same number of graduates are expected over the coming decade.

Occupation after graduation

According to the survey of graduates, the participation rate of graduates in English literature was slightly higher than that of graduates with bachelor's degrees taken as a whole. Despite this higher rate, the proportion of those who were employed two years after graduation was about the same at that of graduates with bachelor's degrees taken together, indicating a slightly higher unemployment rate. Only two out of three graduates in this discipline were working in an occupation at least partially related to their education, a level much lower than for other graduates.

Occupational profile

The occupational profile of these graduates reflects the difficulties they have in finding a job related to their education. Teaching is still the occupation that offers the greatest opportunity, and 40% of employed graduates were working in that field.

General picture

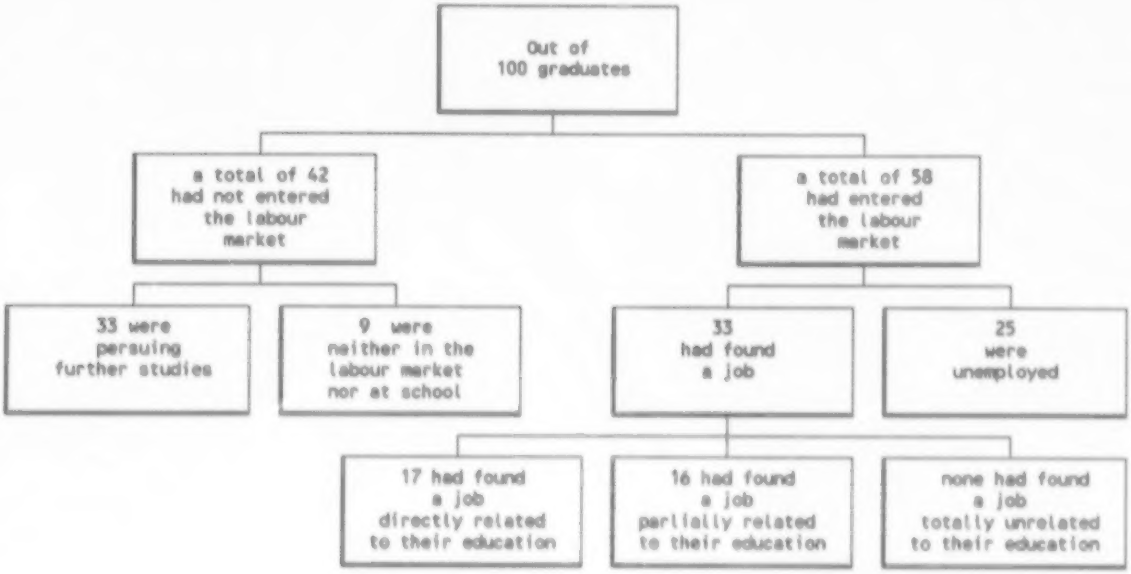
The labour market offers few opportunities to these graduates in terms of jobs related to their education. All the same, in a proportion equal to the average, graduates in this discipline would make the same academic choice over again.

During the coming years, labour market entry for these graduates should remain the same as over the past number of years.

FRENCH
BACHELOR'S DEGREE

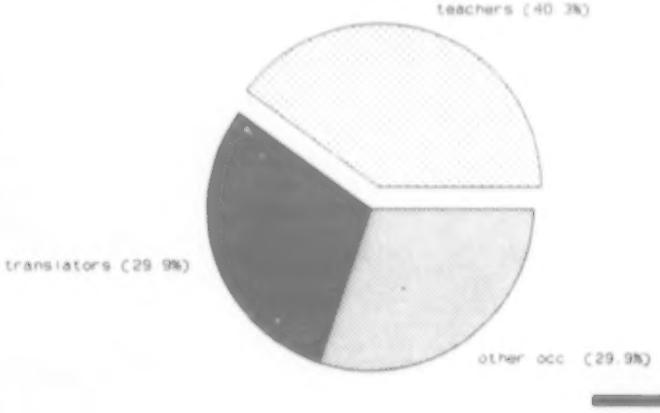
HUMANITIES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 42 had not entered the labour market
a total of 58 had entered the labour market
33 were persuing further studies
9 were neither in the labour market nor at school
33 had found a job
25 were unemployed
17 had found a job directly related to their education
16 had found a job partially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	350	1.6	---
1985/90	300	1.2	1.0
1990/95	300	1.2	0.9
1995/2000	300	1.2	1.0

FRENCH
BACHELOR'S DEGREE

The study of French literature and conventions of literary creativity comprise the core of the French literature program. Most Quebec universities offer a program of study in this discipline. There is generally no specific prerequisite besides a Diploma of Collegial Studies or equivalent. Applicants must, however, demonstrate a sufficient knowledge of the French language.

Trends and projections

The popularity of this field of study has dropped slightly over the past 10 years, the proportion of graduates with bachelor's degrees in this field to graduates with bachelor's degrees taken as a whole declined from 2% in 1980 to 1.2% in 1989. All the same, it is estimated that 300 students a year will graduate in this field over the next decade, if current trends continue.

Occupation after graduation

The labour market participation rate for these graduates is appreciably below the average for graduates with bachelor's degrees taken as a whole. At the same time, a much higher than average percentage had decided to pursue further studies. This is due in large part to difficult labour market conditions, reflected by the high number of graduates who were unemployed two years after graduation. All the same, those who had succeeding in finding a job were more often working in an occupation at least partially related to their education.

Occupational profile

The occupational profile of these graduates typifies the link between education and work. Forty per cent of graduates were working as teachers, while library administrators and translators/interpreters each accounted for 30% of jobs obtained.

General picture

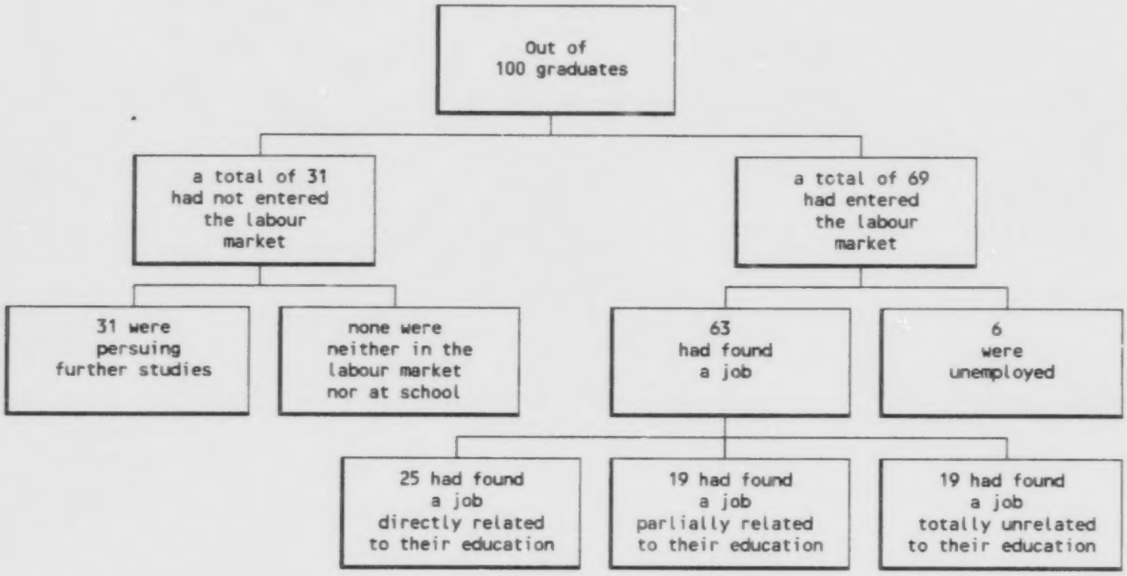
A tight labour market seems to await these graduates when they finish their degrees. Few had been able to find a job two years after graduation, and many of those who had were working part time. Term employment also seems to characterize their first few years in the labour market and explains why a high unemployment rate is coupled with a close link between work and education. Only 50% of these graduates said they would make the same academic choice.

During the coming decade, the labour market for these professionals is not expected to improve significantly, in view of the number of graduates and the relatively few openings forecast in the occupations in which they usually find employment. Because teaching is a not unimportant means of entry into the labour market, further studies in teacher training can be a major asset.

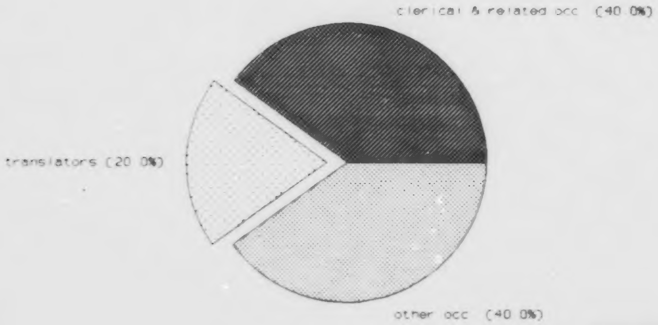
LINGUISTICS
TRANSLATION-INTERPRETATION
BACHELOR'S DEGREE

HUMANITIES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 31 had not entered the labour market
a total of 69 had entered the labour market
31 were persuing further studies
none were neither in the labour market nor at school
63 had found a job
6 were unemployed
25 had found a job directly related to their education
19 had found a job partially related to their education
19 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	390	1.7	0.7
1985/90	380	1.5	1.0
1990/95	400	1.6	1.1
1995/2000	400	1.5	1.2

HUMANITIES

LINGUISTICS
TRANSLATION-INTERPRETATION
BACHELOR'S DEGREE

A program of studies in linguistics is offered at Concordia, Laval, McGill, Montréal, UQAM and UQAC. Concordia, Laval, Montréal and UQTR also grant degrees in translation/interpretation. Prerequisites vary from university to university, but a thorough knowledge of French and/or English is a basic requirement for students of translation.

Trends and projections

The number of graduates in the different disciplines making up this field of study has grown at a rate comparable to the number of graduates with a bachelor's degree taken as a whole, so that since the early 1980s they have accounted, on average, for 1.5% of a graduates at this level. If this trend continues over the coming years, there will be 400 graduates annually in these disciplines throughout the 1990s.

Occupation after graduation

The results of the survey of graduates conducted in 1988 indicate that nearly 70% of graduates in this field of study were in the labour market two years after graduation, a rate slightly lower than that of graduates with bachelor's degrees taken as a whole. If a proportion somewhat smaller than the average were employed, a higher percentage had decided to continue their education, making the unemployment rate comparable to that of graduates taken as a whole. Nearly 70% of those who had found jobs held positions at least partially related to their education. Although respectable, this proportion is all the same lower than the average, since 85% of all employed graduates said they held jobs directly or partially related to their education.

Occupational profile

The occupational profile of these graduates was relatively fragmented. Among the most significant occupations in terms of link with education, that of translators and interpreters accounted for 20%.

Salary

In the survey of graduates, the average salary ($23,000 annually) reported by respondents employed full timed was approximately 10% below that reported by graduates at this level taken as a whole.

General picture

The trends revealed by the preceding data indicate that these graduates are facing a slightly more difficult labour market than the average. A lower than average number were working in occupations directly related to education, and salaries were also below average. This probably explains why a higher proportion of graduates decided to continue their education. A little more than 55% of them said they would make the same academic choice, compared with nearly 70% of graduates with bachelor's degrees taken as a whole.

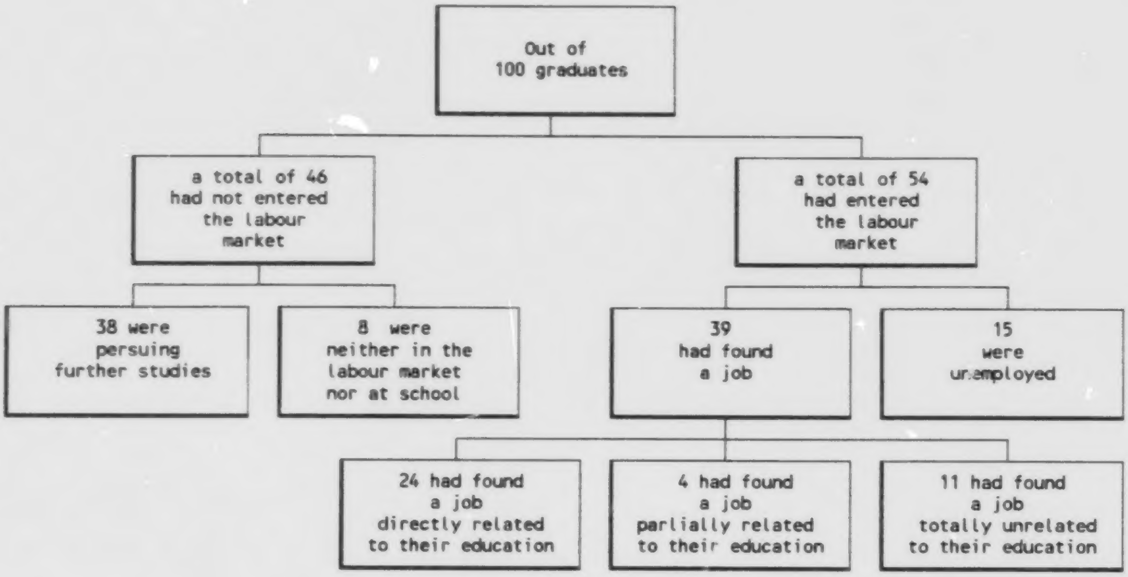
During the 1990s, labour market entry conditions could improve, even if the market is not likely to be able to absorb all graduates. Growth in requirements in occupations most closely related to education is higher than requirements in all occupations taken together. Contract work will continue to be a basic characteristic of many jobs in this sector.

LANGUAGES AND LITERATURE

MASTER'S DEGREE AND DOCTORATE

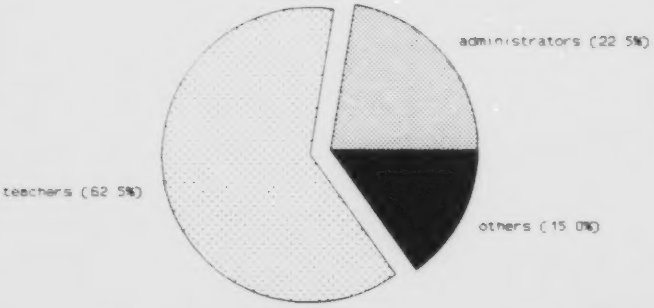
HUMANITIES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 46 had not entered the labour market
a total of 54 had entered the labour market
38 were persuing further studies
8 were neither in the labour market nor at school
39 had found a job
15 were unemployed
24 had found a job directly related to their education
4 had found a job parlially related to their education
11 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	155	3.7	1.3
1985/90	185	3.7	1.0
1990/95	180	3.8	0.9
1995/2000	165	3.8	1.0

LANGUAGES AND LITERATURE
MASTER'S DEGREE AND DOCTORATE

This category includes such major disciplines as linguistics (Concordia, Laval, Montréal, UQAC and UQAM), literature (Montréal, McGill, Sherbrooke and UQ), English (Concordia, McGill and Montréal), French (Laval, McGill, Montréal and Sherbrooke), as well as German, Spanish and Russian studies (McGill and Montréal).

Trends and projections

Since the early 1980s, the percentage of graduates in this category has remained more or less constant. If the trend continues over the coming years, the annual average number of graduates should be 170 until the end of the decade.

Graduates' labour market participation

The participation rate of graduates two years after finishing their programs was markedly lower than that of graduates with postgraduate degrees as a whole. A sizeable proportion had decided to pursue further studies. Most of those who had decided to enter the labour market were employed, the unemployment rate being average. However, nearly 30% of employed graduates considered that their work was in no way related to their education. This is a significantly higher percentage than that among graduates with master's degrees or doctorates as a whole, 10% of whom were in such a position.

Occupational profile

The occupational group accounting for the highest number of employed graduates was teachers. University teaching was the most common with 23% of jobs. The second largest category was that comprising management positions, held by more than 20% of graduates.

General picture

During the second half of the 1980s, a slight drop in hiring for jobs related to this field of study was observed. The situation has remained difficult for these graduates, as evidenced by the low participation rate and weak link between education and work. The lower level of satisfaction with their education expressed by these graduates is another indication of the difficult situation.

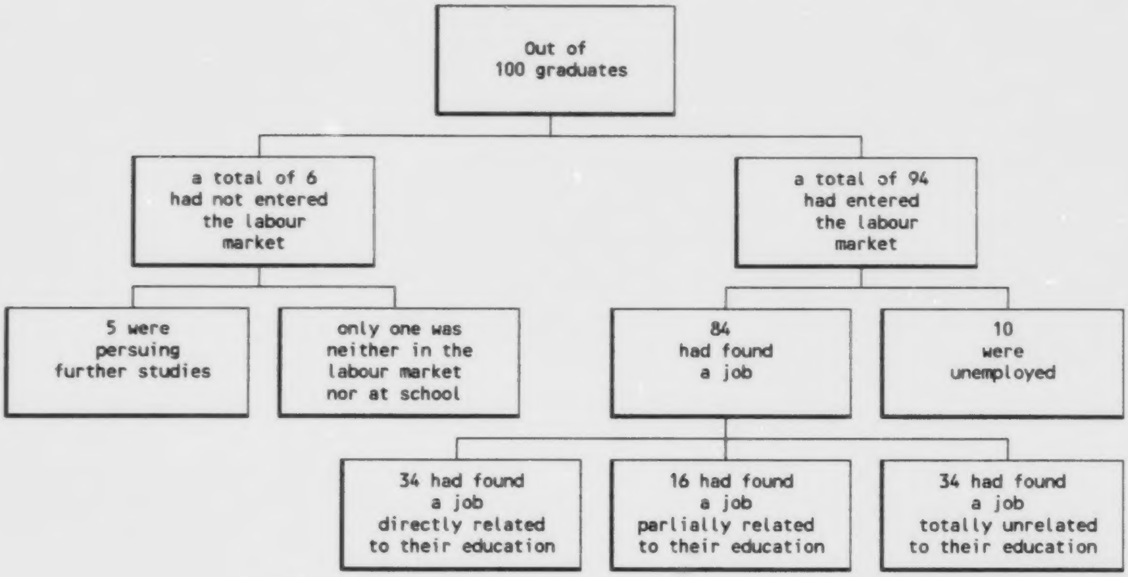
Labour market entry conditions should remain basically the same during the 1990s as they were during the past number of years. Since teaching provides many openings, additional studies in education will continue to be an important asset for those who wish to pursue a career in teaching.

DOCUMENTATION TECHNOLOGY

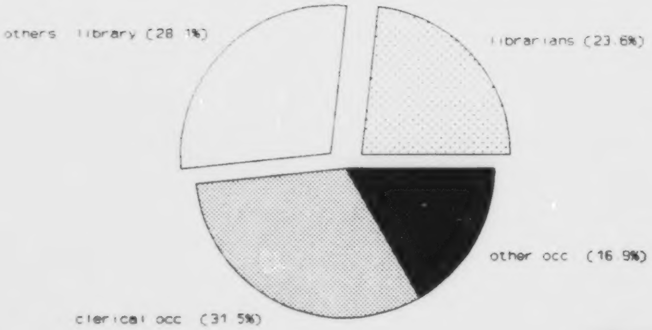
HUMANITIES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 6 had not entered the labour market
a total of 94 had entered the labour market
5 were persuing further studies
only one was neither in the labour market nor at school
84 had found a job
10 were unemployed
34 had found a job directly related to their education
16 had found a job parlially related to their education
34 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	180	1.2	0.8
1985/90	175	1.2	1.0
1990/95	155	1.2	1.4
1995/2000	160	1.2	1.5

HUMANITIES

DOCUMENTATION TECHNOLOGY
VOCATIONAL COLLEGE DIPLOMA

The study program in documentation technology is available in the Outaouais, Mauricie-Bois-Francs, Montreal, Laurentian, Quebec City and Saguenay-Lac St-Jean regions.

Trends and projections

The number of graduates in this discipline has been up and down over the past decade, reaching a peak of 225 in 1984 and a low of 135 in 1982. If its relative importance of the past few years persists, an average of some 150 to 160 students will graduate each year over the next decade.

Occupation after graduation

Of those who entered the labour market, the placement rate was slightly lower than the average when taken as a whole and appreciably lower than the average when we consider jobs at least directly related to education. In fact, barely 50% of the jobs held had any relation to education compared to more than 80% for the graduates taken as a whole. Nonetheless, a markedly lower than average proportion decided to continue their studies after graduation. The fact that no program in library science is offered at the bachelor's level is certain to have a great deal of bearing on this decision.

Occupational profile

The occupational profile of graduates who were employed one year after completing their studies was clearly dominated by the occupational group of library employees and that of librarians, each accounting for 23% of the jobs held. The other occupational groups that provided a means of entry into the labour market for these graduates were those in the administrative support staff and services category.

Salary

The average salary of respondents to the Relance Survey who were working full time in the first year after graduation was $15,800 annually. This salary level was $2,000 lower than that of vocational college graduates taken as a whole.

General picture

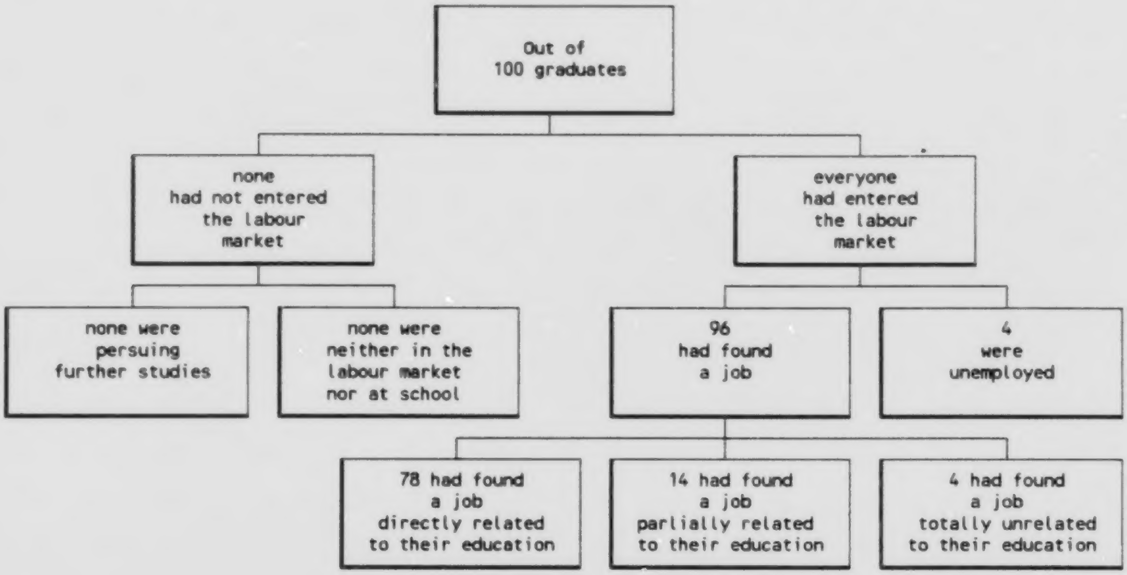
Due to the growing requirement for information in most activity sectors, the demand for documentation professionals has experienced a more rapid than average growth over the past few years. The automation of repetitive or mechanical tasks, however, has tended to create the need for more versatile personnel who are more oriented towards user support. Even if they were less affected by the development of databases than their university colleagues, documentation technology graduates have nonetheless benefited a great deal from the employment opportunities generated by the maintenance and daily use of this technology.

Over the coming years, the growth of employment in occupations linked to this field of training should continue. While over the past few years job prospects for these graduates were fewer than the average, they should gradually improve over the 1990s and compare favourably to the average. As traditionally active employment sectors such as libraries and public reference centres will not constitute the most dynamic sectors, the search for employment will increasingly have to include other activity sectors.

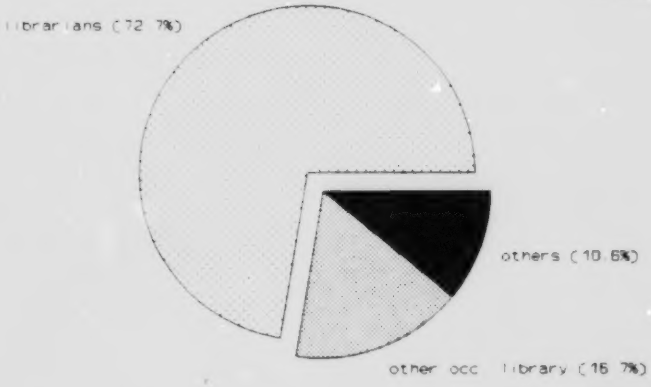
LIBRARY SCIENCE — HUMANITIES

MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
none had not entered the labour market
everyone had entered the labour market
none were persuing further studies
none were neither in the labour market nor at school
96 had found a job
4 were unemployed
78 had found a job directly related to their education
14 had found a job parlially related to their education
4 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	125	3.1	0.9
1985/90	120	2.3	1.0
1990/95	105	2.3	1.5
1995/2000	100	2.3	1.7

LIBRARY SCIENCE
MASTER'S DEGREE AND DOCTORATE

McGill University and the University of Montréal offer master's programs in library science and information science. Master's degrees in museology are offered at the University of Quebec at Montréal and the University of Montréal.

Trends and projections

The popularity of this discipline declined during the 1980s, the percentage of graduates dropping from 3.6% at the beginning of the decade to 2.2% at the end. The proportion may level off during the 1990s, leading to a drop in the annual number of graduates to about 100 by the end of the century.

Graduates' labour market participation

According to the 1988 survey of 1986 graduates, all graduates in this field of study had entered the labour market two years after obtaining their degrees. The placement rate was very high, while the unemployment rate was below the average of 6% for graduates with master's degrees or doctorates as a whole. Moreover, the proportion of jobs at least partly related to education was among the highest: more than 95% of positions held were directly or indirectly related to studies, compared with an average of 85% among graduates with advanced degrees as a whole.

Occupational profile

The occupational profile reflects the close link between job and education, since nearly 90% of employed graduates were working as specialists in a library, museum or archive. Positions as librarians or archivists alone accounted for almost 75% of jobs.

Salary

While the placement statistics on this field of study make it one of the most attractive, the salary figures make it less inviting. According to the Statistics Canada survey, graduates working full time were earning an average annual salary of $25,900. This was considerably lower than the $37,400 earned annually by graduates with advanced degrees as a whole.

General picture

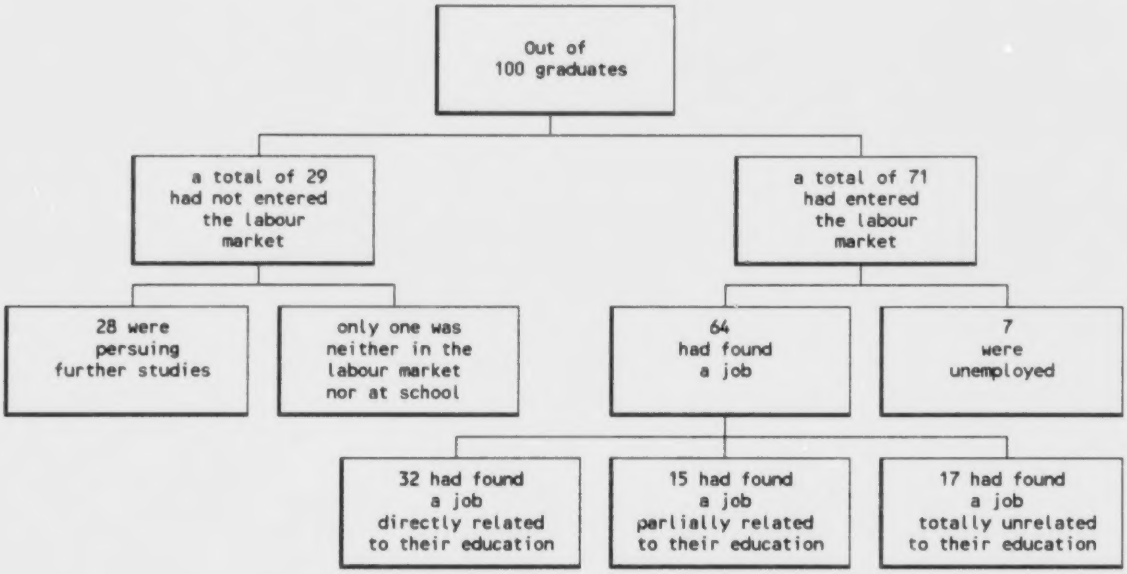
The dichotomy between the data on placement and that on salaries is a reflection of the fact that these jobs are not permanent. A large number of graduates work as free lances and therefore are more vulnerable to interruptions in income. Employment irregularity has increased over the past few years, as the profession of librarian has extended beyond institutional libraries to other sectors, notably the service sectors.

Over the coming years, the demand for information specialists is expected to remain high and job opportunities abundant. The sector, however, is likely to continue undergoing profound changes, as a new profession--information broker--emerges. Free lance work should remain popular, but specialized firms may spring up, thus increasing the number of permanent jobs available.

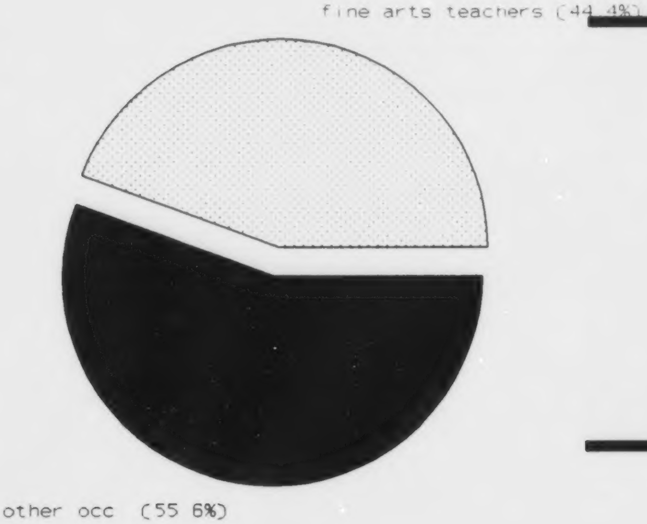
MASS COMMUNICATIONS HUMANITIES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 29 had not entered the labour market
a total of 71 had entered the labour market
28 were persuing further studies
only one was neither in the labour market nor at school
64 had found a job
7 were unemployed
32 had found a job directly related to their education
15 had found a job parlially related to their education
17 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	75	0.5	1.5
1985/90	85	0.6	1.0
1990/95	80	0.6	1.0
1995/2000	80	0.6	1.1

MASS COMMUNICATIONS
VOCATIONAL COLLEGE DIPLOMA

This program in media art and technology is offered only at the Jonquière Cegep.

Trends and projections

From an average of 75 during the first half of the 1980s, the number of graduates reached an average of 85 annually in the second half of the decade. This growth was slightly more rapid than the average, raising the relative importance of this discipline from 0.5% to 0.6% in the vocational college sector overall. During the 1990s, the number of graduates should remain more or less at the current level.

Occupation after graduation

A greater than average proportion of graduates were pursuing their studies in the year after graduation. For the graduates who entered the labour market, placement in jobs which were at least partially related to education was lower than the average and the unemployment rate was slightly higher.

Occupational profile

A little more than 45% of graduates who were employed one year after they completed their studies were working in an occupation in the arts category. Of these, the most common groups were the writers groups (journalists, columnists and technical writers), accounting for 15% of the jobs, radio and television announcers, with 15% of the jobs and producers-directors, with nearly 10% of the jobs. As for the graduates taken as a whole, the occupational groups related to secretarial arts and sales constituted the most frequent means of entry into the labour market.

Salary

According to the 1988 Relance Survey, graduates in this discipline who were working full time in the year after they completed their studies were earning an average of $18,200 annually.

General picture

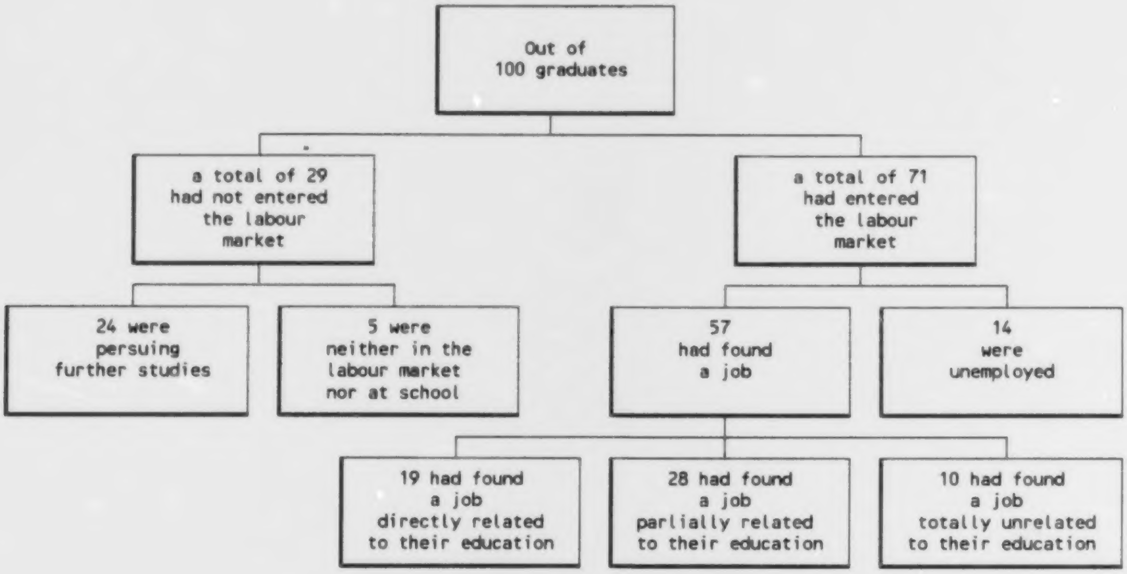
If education-related placement is taken into account, employment opportunities for these graduates were slightly lower than the average. Moreover, these graduates had to contend with competition from graduates with bachelor's degrees in communications, a certain number of whom entered the labour market in the same occupational categories with more success than college graduates. This situation probably explains in part the decision of a high proportion of college graduates to continue their studies.

The comparative growth in the number of graduates and in the demand in related occupations indicate that the outlook could improve somewhat during the next few years. This is especially true for written communications, which will continue to benefit from the proliferation in the past few years of specialized magazines and newspapers and the rising demand in the area of technical writing. However, this outlook will still be less encouraging than for vocational college graduates taken as a whole.

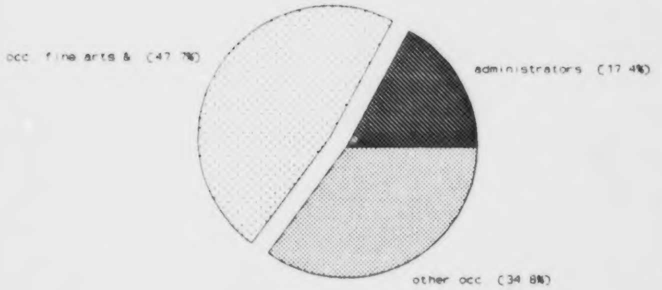
OTHER MASS COMMUNICATIONS HUMANITIES

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 29 had not entered the labour market
a total of 71 had entered the labour market
24 were persuing further studies
5 were neither in the labour market nor at school
57 had found a job
14 were unemployed
19 had found a job directly related to their education
28 had found a job parlially related to their education
10 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	275	1.3	1.8
1985/90	345	1.4	1.0
1990/95	350	1.4	0.9
1995/2000	375	1.5	1.0

OTHER MASS COMMUNICATIONS
BACHELOR'S DEGREE

This field of study includes cinema, radio and television, journalism, public relations and other forms of mass communications. An undergraduate program is offered at Concordia and UQAM. A major is possible at Concordia, Laval and Montréal. There is generally no prerequisite, but selection interviews may be held.

Trends and projections

During the 1980s, the number of graduates in these disciplines rose from 250 to 350. Thus it has maintained its relative importance in relation to bachelor's degrees as a whole. During the 1990s, the number of graduates is expected to remain the same as over the past few years.

Occupation after graduation

According to the 1988 survey of 1986 graduates, the participation rate of these graduates is slightly lower than that of graduates with bachelor's degrees taken as a whole. Among these graduates who were in the labour market, however, the employment rate was much lower than that of graduates in other fields, and the unemployment rate much higher. Moreover, jobs were more often only partially rather than directly linked to education.

Occupational profile

Nearly 50% of employed graduates were working in the arts sector. Among these, the occupational groups made up of writers and announcers (15%) and photographers and cameramen (15%) accounted for the highest concentrations.

Salary

According to the survey of graduates, the average salary of respondents working full time in 1988, or two years after graduation, was $21,400 annually. This was 20% below the average for other graduates with bachelor's degrees.

General picture

General labour market conditions for these graduates following graduation offered lower than average potential in terms of both job entry and salary. Those graduates who were working considered their jobs, on average, less related to their education that graduates in other disciplines. Moreover, a lower proportion that average said they would take the same programs today (approximately 60%).

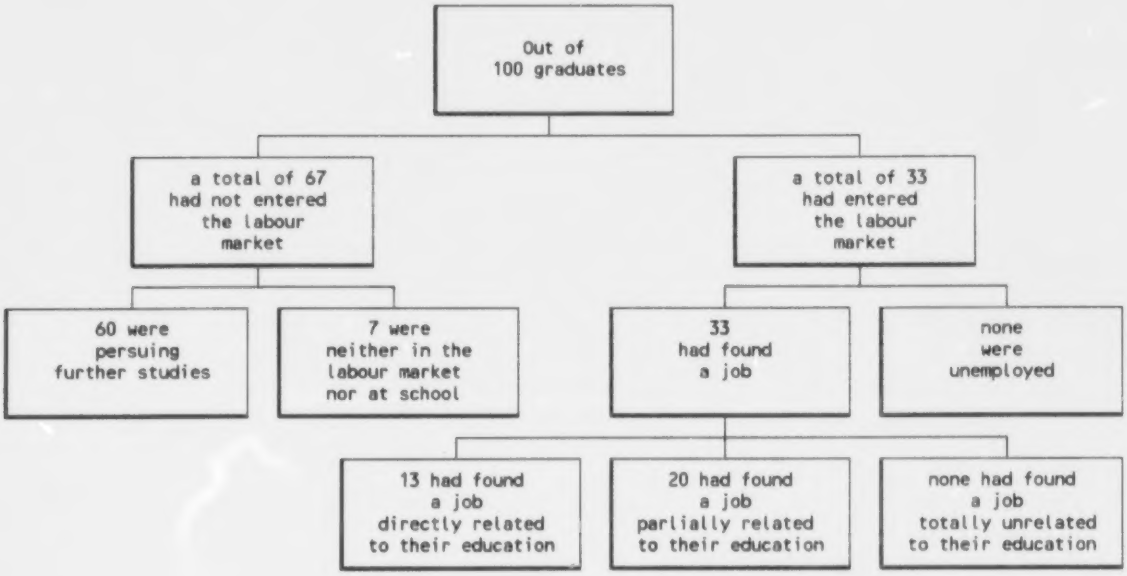
During the 1990s, the market will remain competitive in most of the disciplines making up this field of study. Prospects seem to be more promising, however, in specialties connected with the print media. The proliferation of trade magazines over the past few years and the growing demand for technical writers could provide job opportunities for these graduates. Competition from graduates in related disciplines could be a factor, however.

HISTORY

BACHELOR'S DEGREE

HUMANITIES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 67 had not entered the labour market
a total of 33 had entered the labour market
60 were persuing further studies
7 were neither in the labour market nor at school
33 had found a job
none were unemployed
13 had found a job directly related to their education
20 had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**

non available

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	335	1.5	0.2
1985/90	290	1.2	1.0
1990/95	300	1.2	1.0
1995/2000	300	1.2	0.9

HISTORY
BACHELOR'S DEGREE

This field of study encompasses all the specialized disciplines of history, except the teaching of history. Most Quebec universities offer study programs in history. There is no prerequisite in most universities.

Trends and projections

The popularity of this discipline has declined over the past few years. In the various Quebec universities the proportion of graduates in this field to graduates with bachelor's degrees taken as a whole dropped from more than 2% in the late 1970s to slightly more than 1% in 1989. If the trends of the past few years continue, 300 students will graduate each year over the coming decade.

Occupation after graduation

According to the 1988 survey of graduates, about 60% of respondents with bachelor's degrees in this discipline were still in school two years after graduation. All those who entered the labour market succeeded in obtaining jobs they considered at least partially related to their education.

Occupational profile

Given the small number of respondents to the 1988 survey who were employed and their occupational diversity, it was not possible to extract any relevant information concerning occupational profile and salary for this discipline.

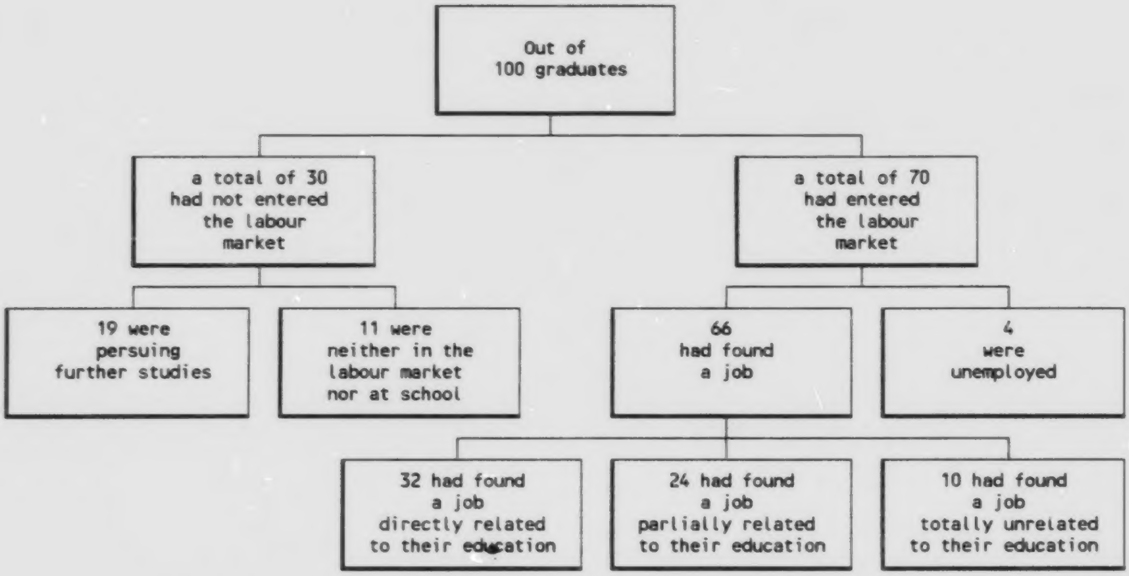
General picture

The labour market does not seem to offer graduates in this discipline sufficient prospects to give rise to a participation rate comparable to that of other disciplines at the bachelor's level. Although the data tend to show a close link between employment and education, the small proportion of employed graduates is a predominant factor in the statistics and clearly reflects the market's limited job opportunities. All the same, a proportion of graduates comparable to other graduates with bachelor's degrees indicated that they would make the same academic choice.

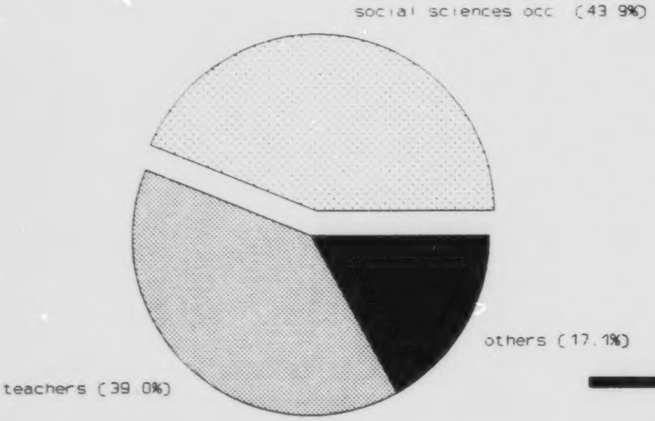
It is very unlikely that employment conditions for these graduates will improve even slightly over the coming years. Whether with regard to secondary school teaching, college teaching or specialized work in the social sciences, forecasts all point to a possible labour surplus.

HISTORY **HUMANITIES**
MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 30 had not entered the labour market
a total of 70 had entered the labour market
19 were persuing further studies
11 were neither in the labour market nor at school
66 had found a job
4 were unemployed
32 had found a job directly related to their education
24 had found a job parlially related to their education
10 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	65	1.6	0.4
1985/90	95	1.9	1.0
1990/95	90	1.9	1.1
1995/2000	80	1.9	1.0

MASTER'S DEGREE AND DOCTORATE

Bishop's, Concordia, Laval, McGill, Montréal, Sherbrooke and UQAM all offer a master's program in history and, except for Bishop's and Sherbrooke, a doctoral program also.

Trends and projections

After remaining more or less stable between 1977 and 1985, the number of graduates has risen to nearly 100 a year. This number is expected to drop slightly over the coming period mainly because of the diminishing demographic pressure of young people.

Graduates' labour market participation

According to the 1988 survey, the labour market participation rate of history graduates, like that of their colleagues with bachelor's degrees, was below average. More than 10% were neither working nor pursuing further studies, compared with 2% for graduates as a whole. The placement rate of those who had entered the labour market, however, was average. A proportion of 80% of employees who had found employment said their jobs were at least partly related to their education; this was close to the average. Nevertheless, a much lower than average number of graduates had jobs directly related to their education.

Occupational profile

Most graduates employed two years after graduation were working in one of two main occupational categories. More than 40% were working as social science professionals, a category under which historians are classified. Nearly 35% were working in various teaching positions.

Salary

In the 1988 survey of 1986 graduates, respondents working full time reported an average annual salary of $35,100. This was average for graduates with advanced degrees.

General picture

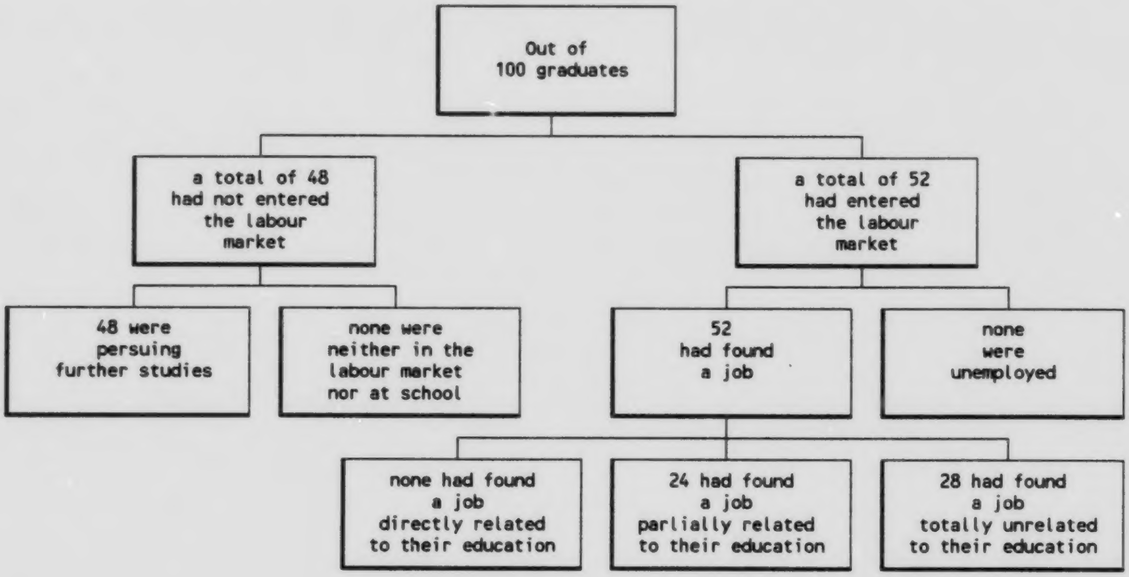
Certainly, these graduates are faced with a labour market offering more job opportunities than those available to their colleagues with bachelor's degrees. However, there are still not quite as many job opportunities proportionately as those available to graduates with master's degrees and doctorates as a whole. That is probably why 65% of these respondents said they would make the same academic choice, compared with 80% for the whole.

During the 1990s, budget constraints, which will affect the different levels of government, the main employer of social science specialists, and the drop in the number of secondary and college students, which could have an impact on the number of teachers required, will mean that job opportunities for graduates in history will remain below average.

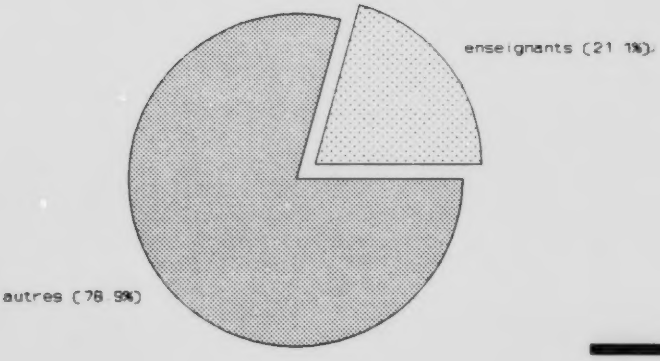
PHILOSOPHY-RELIGION
BACHELOR'S DEGREE

HUMANITIES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 48 had not entered the labour market
a total of 52 had entered the labour market
48 were persuing further studies
none were neither in the labour market nor at school
52 had found a job
none were unemployed
none had found a job directly related to their education
24 had found a job parlially related to their education
28 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	355	1.6	---
1985/90	320	1.3	1.0
1990/95	350	1.4	1.5
1995/2000	350	1.4	1.7

PHILOSOPHY-RELIGION
BACHELOR'S DEGREE

This study program is offered in most Quebec universities. Generally, there is no specific prerequisite other than a Diploma of Collegial Studies or equivalent.

Trends and projections

The number of graduates has remained more or less constant during the past decade. This number should remain between 300 and 350 annually over the 1990s.

Occupation after graduation

A markedly greater than average proportion of graduates chose to continue their studies after obtaining their degree. The large majority of those who had entered the labour market were employed two years after graduation. The jobs they held, however, were only slightly or not at all related to education.

Occupational profile

The occupational profile of these graduates is very diversified since two years after graduation they held jobs that were only slightly related to their education. Nonetheless, about 20% of these graduates had become secondary school teachers.

General picture

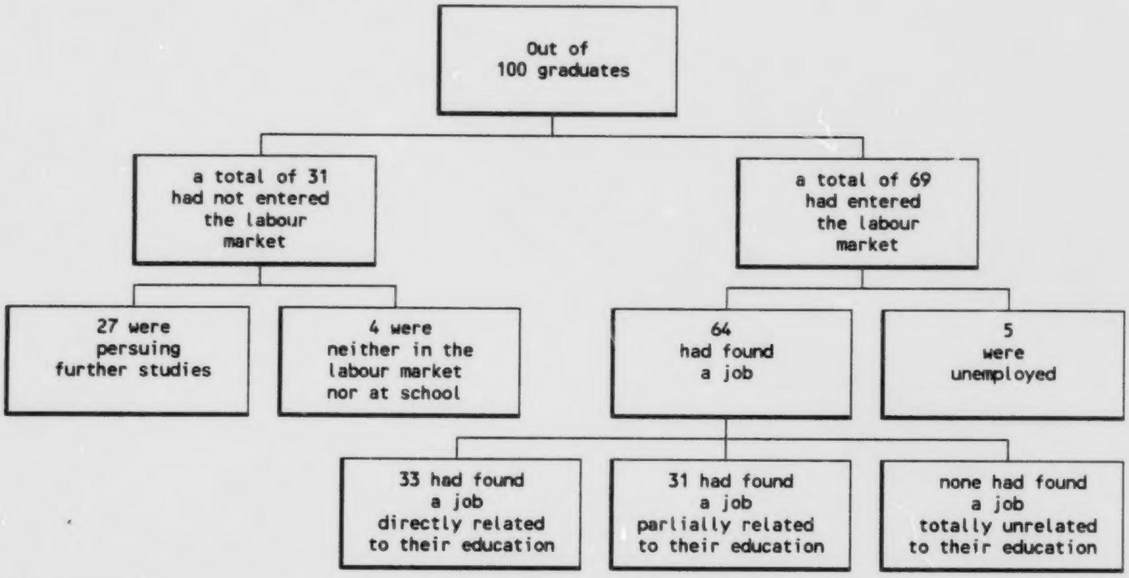
Like other studies at the university level, studies in this discipline are a definite asset to those wishing to enter the labour market. Access to the labour market in related occupations, however, requires that these studies be pursued at higher levels. Complementary qualifications in education can also improve market entry opportunities.

In the coming years, market prospects should remain very similar to those that have prevailed over the past few years.

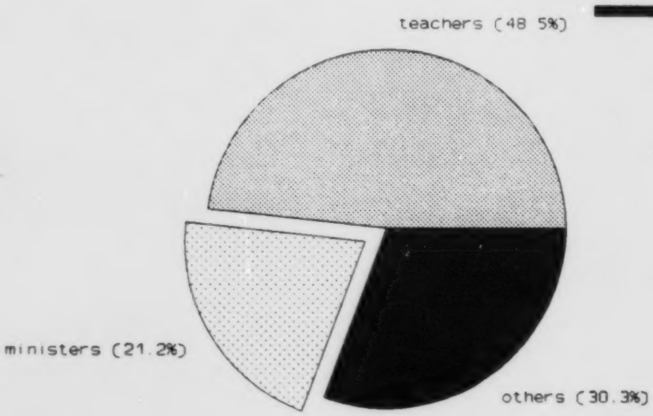
PHILOSOPHY-RELIGION
MASTER'S DEGREE AND DOCTORATE

HUMANITIES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 31 had not entered the labour market
a total of 69 had entered the labour market
27 were persuing further studies
4 were neither in the labour market nor at school
64 had found a job
5 were unemployed
33 had found a job directly related to their education
31 had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	160	3.9	---
1985/90	145	2.8	1.0
1990/95	120	2.6	1.4
1995/2000	100	2.3	1.7

HUMANITIES

PHILOSOPHY-RELIGION
MASTER'S DEGREE AND DOCTORATE

Most Quebec universities offer programs in one or more of the specialties of theology, religious science or pastoral counselling.

Trends and projections

After showing a rise in the first half or the 1980s, the number of degrees in this field dropped slightly during the second half of the decade. The downward trend may continue in the coming years, with the average annual number of graduates reaching approximately 110.

Graduates' labour market participation

Twice as many graduates in this field were pursuing further studies two years after graduation as graduates with master's degrees and doctorates taken as a whole. More than 90% of those who had entered the labour market held positions at least partly related to education. The unemployment rate for these young graduates was 7%, slightly higher than the average for graduates with advanced degrees.

Occupational profile

The teaching profession offered the best job opportunities, with 45% of positions held. Primary and secondary school teachers alone accounted for 35% of jobs. Ministers of religion accounted for 20% of jobs held by graduates two years after receiving their degrees.

Salary

According to the 1988 survey of 1986 graduates, the average annual salary of respondents working full time was $28,000, very much below the average for graduates with a master's degree or doctorate.

General picture

Staff reductions in teaching during the first half of the 1980s certainly limited the job opportunities for these graduates. There has been some recovery since the mid-1980s, however, and the placement level is again comparable with that for other types of training.

The situation should remain the same over the coming years, as the drop in the number for primary and secondary teachers counterbalances the stabilization in the need for teachers at this level.

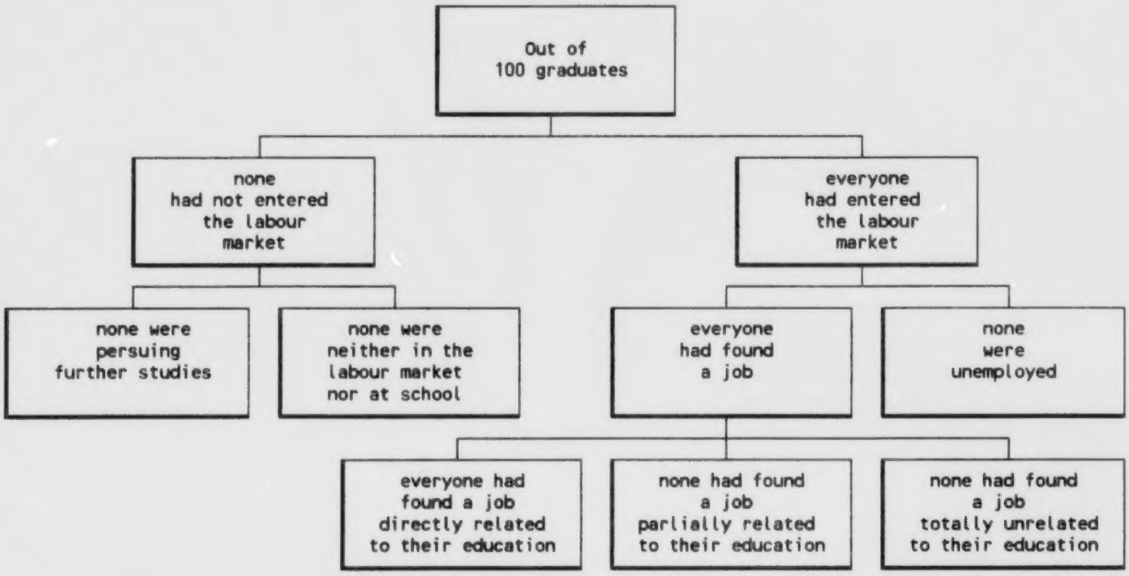
MEDICINE AND HEALTH

DENTISTRY

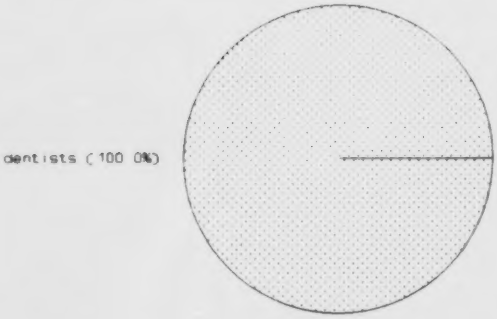
MEDICINE AND HEALTH

DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
none had not entered the labour market
everyone had entered the labour market
none were persuing further studies
none were neither in the labour market nor at school
everyone had found a job
none were unemployed
everyone had found a job directly related to their education
none had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	140	0.6	1.1
1985/90	160	0.6	1.0
1990/95	160	0.6	0.8
1995/2000	165	0.6	0.9

DENTISTRY

DOCTORATE

The universities of Laval, McGill and Montréal all offer programs in dentistry. Those who wish to enrol in these programs must have a solid base in college-level mathematics, physics, chemistry and biology. Candidates must also take the Canadian Dental Association's dentistry aptitude tests.

Trends and projections

Throughout the 1980s, the number of dentistry graduates in Quebec averaged about 145 annually. Given the increased number of university students, this number is expected to reach 160 during the 1990s.

Occupation after graduation

The results of the 1988 survey of graduates conducted by Statistics Canada shows that all those surveyed found a job that was directly related to their education.

Occupational profile

The occupational profile of these graduates fully reflects the situation described above since all the respondents were practising dentistry.

Salary

Significant variances in salary make it impossible to determine the respondents' average salary. However, this salary greatly exceeds the average salary of the other graduates taken as a whole if we take into account the fact that the lowest income of respondents to the survey was already $45,000 annually.

General picture

Both placement and salary indicators show that these graduates enjoyed a marked advantage over graduates with bachelor's degrees with respect to the labour market. The rate of satisfaction with education reflects this situation well since nearly 95% of the graduates said they would make the same choice.

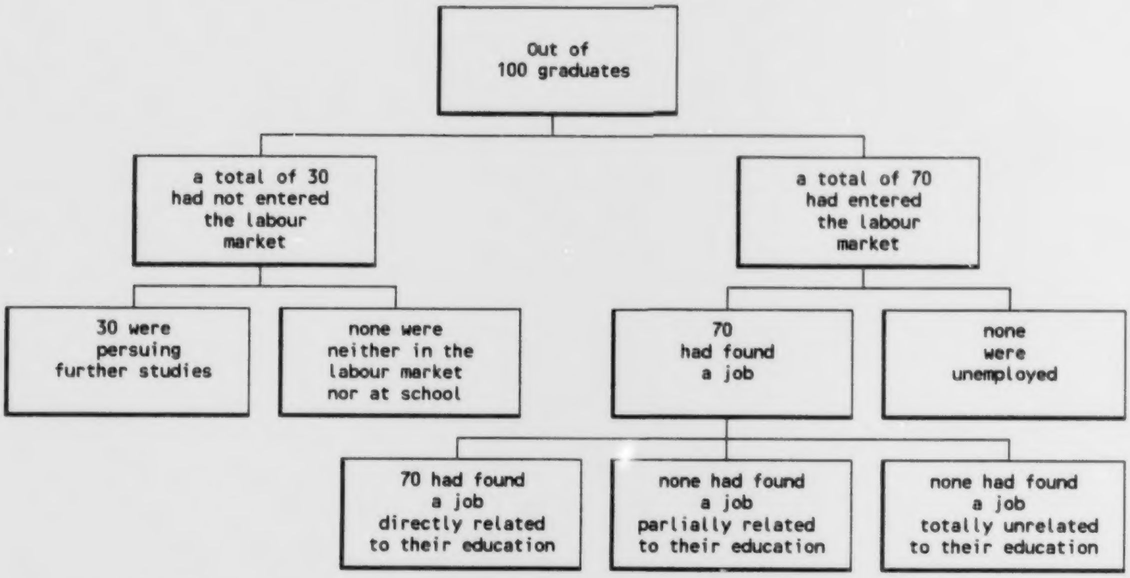
The relatively small number of graduates should make it possible to maintain excellent employment opportunities over the 1990s.

MEDICINE

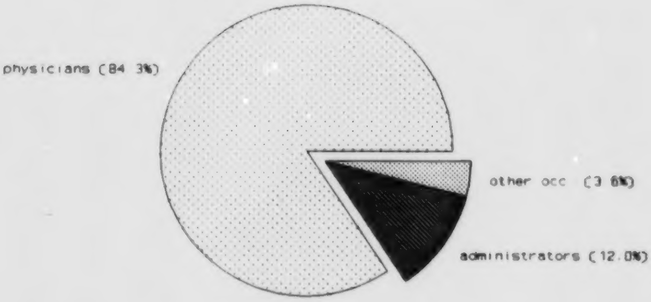
MEDICINE AND HEALTH

DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 30 had not entered the labour market
a total of 70 had entered the labour market
30 were persuing further studies
none were neither in the labour market nor at school
70 had found a job
none were unemployed
70 had found a job directly related to their education
none had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	635	2.9	0.9
1985/90	595	2.4	1.0
1990/95	600	2.3	0.8
1995/2000	625	2.4	0.9

MEDICINE
DOCTORATE

This program is offered by Laval, McGill, Montréal and Sherbrooke. Mathematics, physics, chemistry and biology are prerequisites. Applicants are usually also required to attend an interview and take admission tests. The program is 4 or 5 years long, depending on the university, and a subsequent one- or two-year internship is mandatory.

Trends and projections

With the exception of 1982, the 1980s saw little fluctuation in the number of graduates, which was approximately 600 annually. No changes are expected in the 1990s.

Occupation after graduation

According to the survey of graduates, 30% of graduates in medicine were continuing their education two years after graduation. The others were all working in an occupation directly related to their studies.

Occupational profile

The occupational profile of these graduates is of course dominated by the group of doctors and interns. Some graduates had moved into health services management careers.

General picture

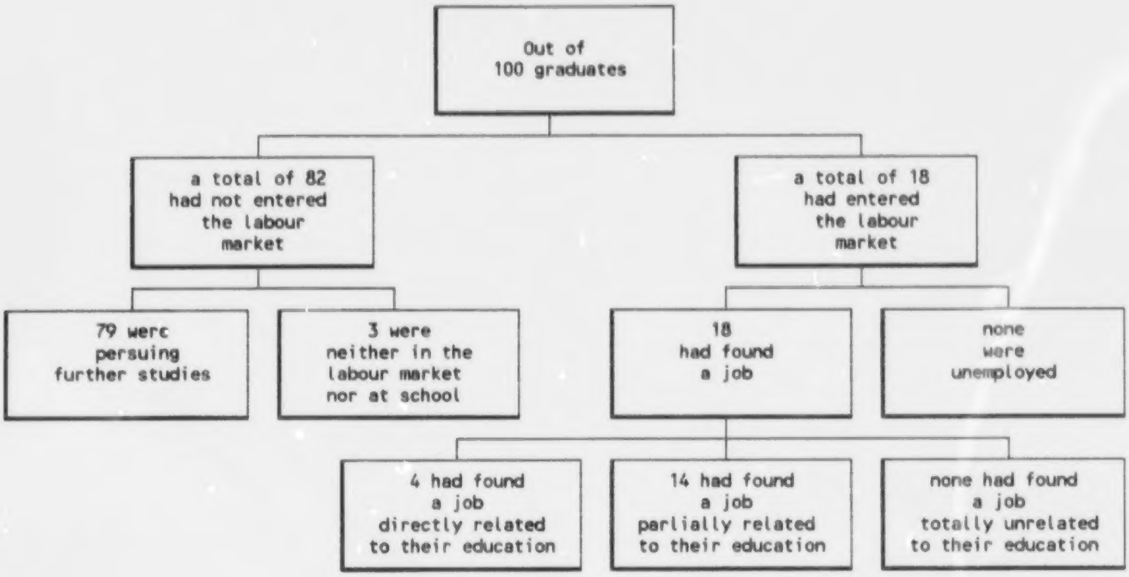
Graduates in this discipline have no trouble entering the labour market. General practitioners and specialists that are in short supply in areas outside the major urban centres must, however, spend some time in the regions. Graduates in medicine were generally very satisfied, and 90% said they had made the right academic choice.

During the 1990s, labour market conditions will remain basically the same as over the last number of years.

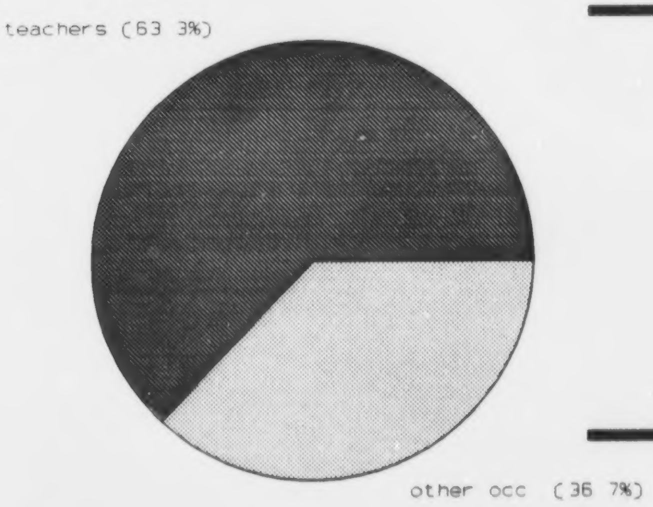
BASIC SCIENCES IN MEDICINE
BACHELOR'S DEGREE

MEDICINE AND HEALTH

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 82 had not entered the labour market
a total of 18 had entered the labour market
79 werc persuing further studies
3 were neither in the labour market nor at school
18 had found a job
none were unemployed
4 had found a job directly related to their education
14 had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	70	0.3	1.0
1985/90	95	0.4	1.0
1990/95	100	0.4	1.0
1995/2000	100	0.4	1.0

BASIC SCIENCES IN MEDICINE
BACHELOR'S DEGREE

This field of study encompasses such basic sciences in medicine as anatomy, biochemistry, biophysics, embryology, endocrinology, genetics and pharmacology. In view of the diversity of specialties, the reader is referred to the different university calendars for information on programs and admission.

Trends and projections

Although the popularity of this field of study declined during the first half of the 1980s, the number of graduates began rising again in 1986. If current trends continue during the 1990s, an average of approximately 100 graduates a year can be expected.

Occupation after graduation

Very few graduates with bachelor's degrees in these disciplines entered the labour market immediately. Nearly 80% of them were still continuing their education two years after obtaining their first degree. Among those who had decided to enter the labour market, there was no unemployment and most jobs were partially related to field of study.

Occupational profile

Jobs in teaching were the most frequent among these graduates.

General picture

Most graduates with a bachelor's degree in this discipline go on to further studies. Its specific labour market is closely connected to research and assisting in university teaching. Labour market entry in jobs directly related to education for those who do not wish to continue their education remains quite difficult. A below average number said they would make the same academic choice if they were to start university again.

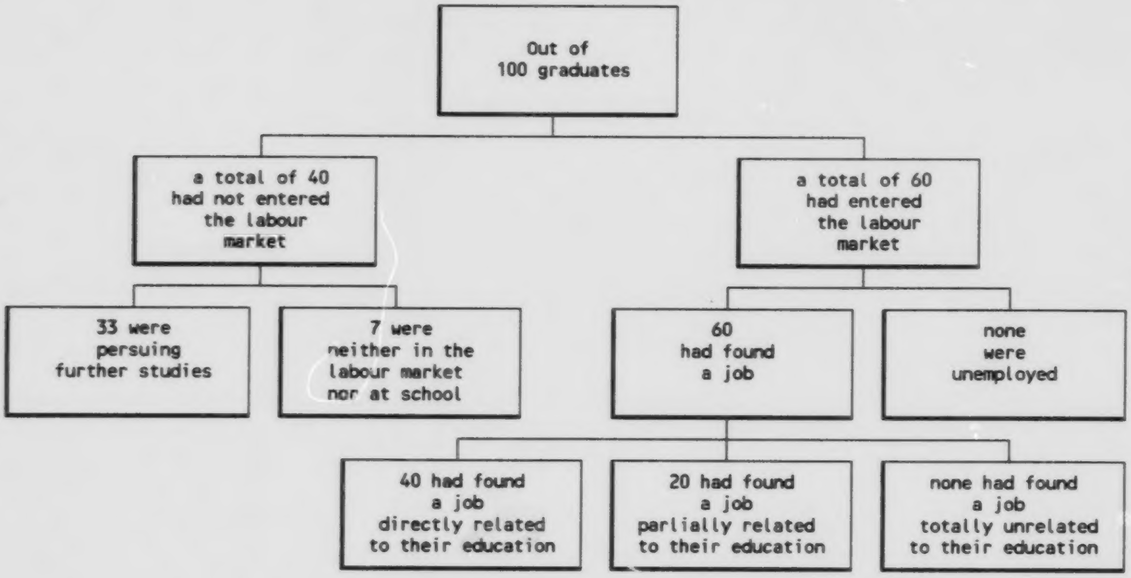
Few changes in job opportunities are expected over the coming years. Most will continue to be mainly in research in universities and similar institutions.

PHARMACY

MEDICINE AND HEALTH

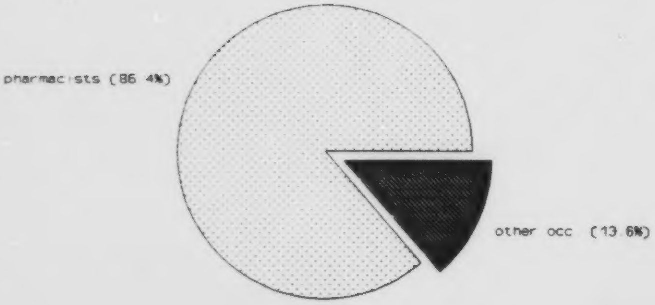
BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 40 had not entered the labour market
a total of 60 had entered the labour market
33 were persuing further studies
7 were neither in the labour market nor at school
60 had found a job
none were unemployed
40 had found a job directly related to their education
20 had found a job partially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	185	0.9	0.8
1985/90	205	0.8	1.0
1990/95	225	0.9	0.9
1995/2000	225	0.9	0.9

PHARMACY

BACHELOR'S DEGREE

This field of study encompasses medical pharmacy, pharmaceutics, hospital pharmacy and other specialties excluding pharmacology, which is classified in the group of basic sciences in medicine. Laval University and the University of Montréal offer programs in this field of study. Prerequisites are college courses in chemistry, biology, mathematics and physics.

Trends and projections

The number of graduates in these disciplines grew at the same rate as the number of graduates with bachelor's degrees in other disciplines. If this trend continues, the average annual number of graduates will be 225 in the 1990s.

Occupation after graduation

A greater than average proportion of graduates were continuing their education two years after graduation. The placement rate in occupations related to education was very high among those who had decided to enter the labour market.

Occupational profile

According to the 1988 survey of graduates, more than 85% of graduates who were employed two years after graduation were working as pharmacists.

Salary

Among survey respondents working full time two years after graduation, average salary was 30% higher than that for all graduates taken together. In 1988, it was $34,600 annually.

General picture

Given the high placement rate and salary level, the labour market for these graduates seems to have offered better than average job opportunities during the past few years. Similar trends in number of graduates and labour requirements during the second half of the 1980s helped to improve access, which was already excellent. Proportionately, more graduates in this field of study were satisfied with their academic choice.

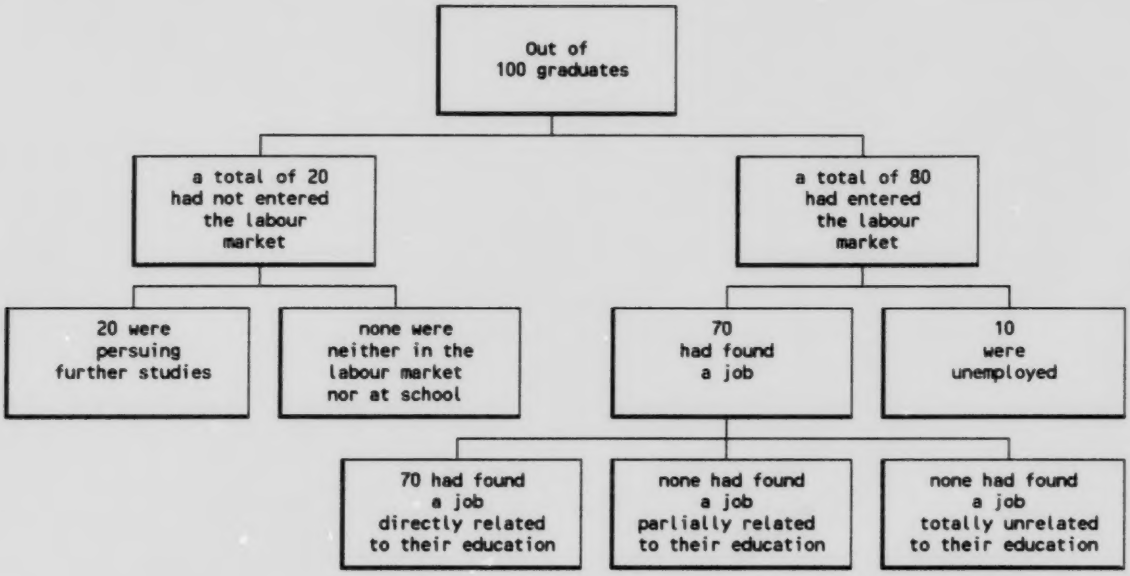
Trends in requirements for the group of pharmacists should absorb the expected increase in number of graduates during the 1990s, thereby maintaining job opportunities at their current levels.

REHABILITATION

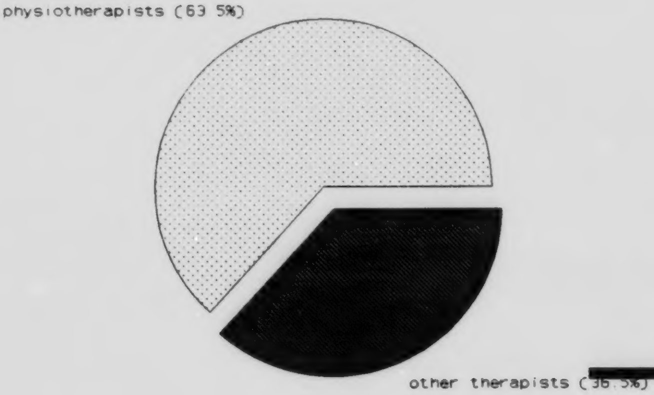
MEDICINE AND HEALTH

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 20 had not entered the labour market
a total of 80 had entered the labour market
20 were persuing further studies
none were neither in the labour market nor at school
70 had found a job
10 were unemployed
70 had found a job directly related to their education
none had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	280	1.2	1.3
1985/90	315	1.3	1.0
1990/95	325	1.3	0.8
1995/2000	325	1.3	1.0

MEDICINE AND HEALTH

REHABILITATION

BACHELOR'S DEGREE

This field of study encompasses occupational and physical therapy. These two programs of study are offered by Laval, McGill and Montréal. The prerequisites are college courses in mathematics, physics, chemistry and biology.

Trends and projections

The number of these graduates as a proportion of all graduates with bachelor's degrees has remained constant over the 1980s. If this proportion stays the same during the 1990s, approximately 325 students a year will graduate in this field of study from the various Quebec universities.

Occupation after graduation

A percentage comparable to the average for bachelor's degrees were employed two years after graduation. Most jobs were directly related to education. Despite these positive indicators, the unemployment rate among these graduates was still above average.

Occupational profile

The occupation profile of employed graduates corresponded closely to education; all employed respondents to the 1988 survey were working as either physical or occupational therapists.

Salary

The average salary of survey respondents working full time was close to the average for all graduates. It was $25,600 annually in 1988.

General picture

Less rapid growth in labour requirements coupled with an increase in the number of graduates led to more difficult labour market entry during the second half of the last decade. Job opportunities were still slightly better than average, however, when compared with those facing graduates with bachelor's degrees taken as a whole. These favourable conditions explain their satisfaction with their education, which is reflected by the high proportion of these graduates who said they thought they had made the right academic choice.

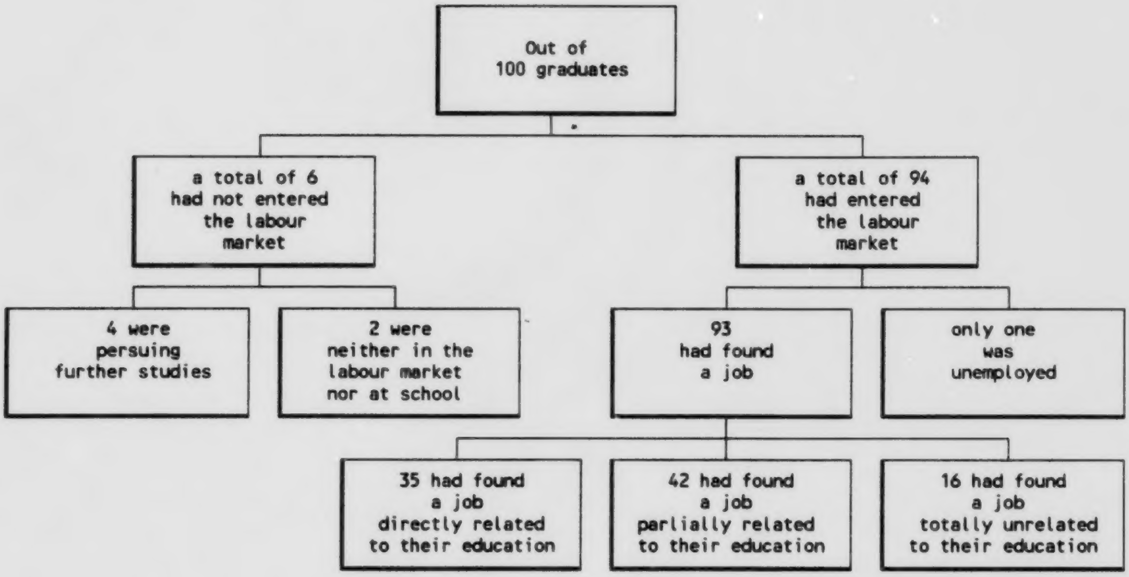
During the coming years, job opportunities will continue to decline somewhat over the medium term and then improve during the second half of the 1990s, since stronger pressure on employment growth is expected. Overall, these graduates should continue to enjoy a labour market offering average job opportunities over the short and medium term, with improvements over the long term.

OTHER HEALTH SCIENCES

BACHELOR'S DEGREE

MEDICINE AND HEALTH

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation



Out of 100 graduates

a total of 6 had not entered the labour market

a total of 94 had entered the labour market

4 were persuing further studies

2 were neither in the labour market nor at school

93 had found a job

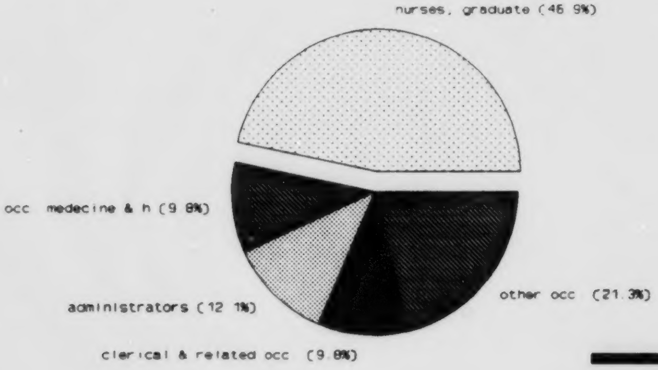
only one was unemployed

35 had found a job directly related to their education

42 had found a job parlially related to their education

16 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	120	0.5	1.0
1985/90	150	0.6	1.0
1990/95	150	0.6	0.9
1995/2000	150	0.6	1.1

OTHER HEALTH SCIENCES
BACHELOR'S DEGREE

Other health sciences include specialties in optometry, audiology, speech therapy, bacteriology, public health, epidemiology and so forth. Different programs leading to degrees in these disciplines are offered by faculties of medicine, optometry and health care administration at all three levels of university education. The University of Montréal offers a professional degree in optometry. A master's degree is required to practise as a speech therapist/audiologist. Prerequisites vary depending on university and program.

Trends and projections

During the 1980s, the number of graduates in this discipline grew at the same rate as all disciplines taken together. If this trend continues over the coming decade, an average of 100 students will graduate annually.

Occupation after graduation

According to the 1988 survey of graduates, a higher than average percentage of graduates had entered the labour market two years after graduation. The link between education and work seemed very close, since 99% of jobs were at least partially related to field of study. Among optometry graduates, the placement rate was even higher and the link more direct.

Occupational profile

Nearly 80% of graduates employed two years after graduation were working in the health care sector. The occupational group of optometrists was most frequent, accounting for more than 45% of jobs. The audiologists (15%) and physiotherapists (8%) groups were also strongly represented.

Salary

In 1988, the average annual salary of graduates working full time two years after graduation was $43,500.

General picture

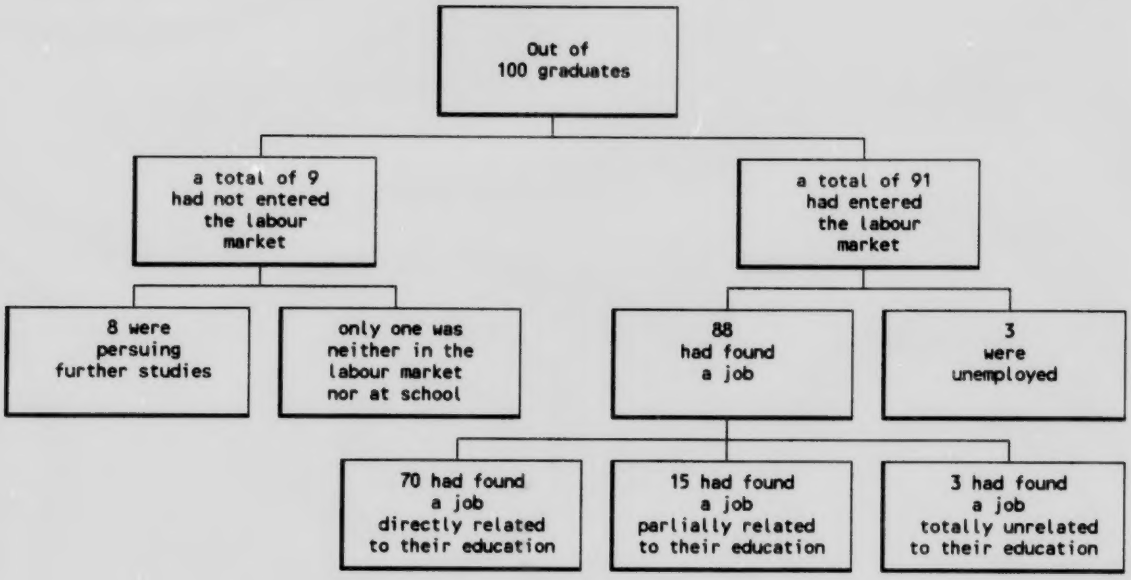
These graduates were faced with a labour market offering better than average job opportunities. This favourable situation should persist throughout the coming decade, even though a slight tightening of the market is expected.

HEALTH SCIENCES

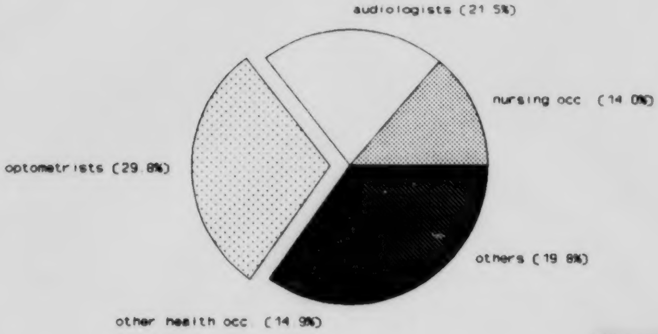
MEDICINE AND HEALTH

MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of
100 graduates
a total of 9
had not entered
the labour
market
a total of 91
had entered
the labour
market
8 were
persuing
further studies
only one was
neither in the
labour market
nor at school
88
had found
a job
3
were
unemployed
70 had found
a job
directly related
to their education
15 had found
a job
parlially related
to their education
3 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	155	3.8	1.3
1985/90	245	4.8	1.0
1990/95	230	4.8	0.9
1995/2000	210	4.8	1.2

HEALTH SCIENCES

MASTER'S DEGREE AND DOCTORATE

This field of study includes graduate programs in anatomy, medicinal chemistry, epidemiology, occupational and environmental health, nursing, optics, orthodontics, speech therapy and audiology, pathology, radiology, rehabilitation, community health and virology.

Trends and projections

The popularity of this broad field of graduate studies has increased over the past 10 years; showing a rise from 4% to 5% in annual number of graduates. If this proportion remains the same, an average of 210 to 230 degrees should be granted annually over the coming decade.

Graduates' labour market participation

The vast majority of graduates in these disciplines enter the labour market. The placement rate of 96% was one of the highest. At the same time, most of the jobs found were closely related to education. While 60% of jobs held by graduates with master's degrees and doctorates as a whole had a direct link with education, the percentage was 80% in this case.

Occupational profile

According to the 1988 survey of 1986 graduates, the major group of health care occupations accounted for 80% of jobs held by these graduates. Optometrists (30%), audiologists (20%) and registered nurses (10%) were the largest groups.

Salary

In 1988, the average annual salary of graduates working full time two years after graduation was $41,200, higher than the average for graduates as a whole ($37,400). Large differences were observed between the various specialties, however. The annual salary in the nursing sciences category was $36,800; and in rehabilitation, $34,500.

General picture

With an unemployment rate half that of other graduates with advanced degrees, a participation rate of 96%, and a very close link between education and job, these graduates are facing labour market prospects markedly better than the average.

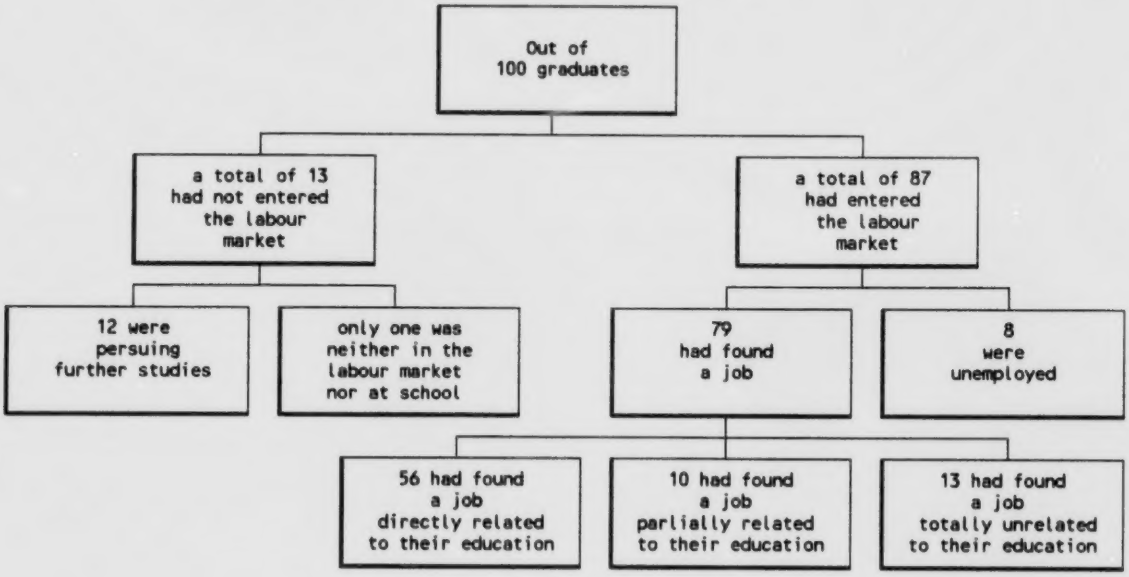
Since demand is expected to continue growing in the health sector, labour market prospects for these graduates should remain above average throughout the decade.

HEALTH SERVICES

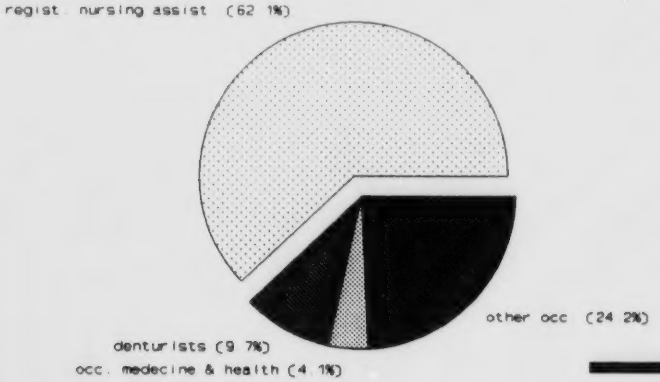
MEDICINE AND HEALTH

SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 13 had not entered the labour market
a total of 87 had entered the labour market
12 were persuing further studies
only one was neither in the labour market nor at school
79 had found a job
8 were unemployed
56 had found a job directly related to their education
10 had found a job partially related to their education
13 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	855	2.9	0.6
1985/90	580	5.0	1.0
1990/95	675	7.1	0.9
1995/2000	705	7.1	0.9

HEALTH SERVICES

SECONDARY VOCATIONAL

This field of study comprises only the two programs for nursing assistants and dental assistants.

Trends and projections

As in health sciences at the college level, the number of graduates in this field of study has diminished substantially over the 1980s. In fact, from more than 850 at the start of the last decade, this sector trained fewer than 600 graduates in the second half of the 1980s. However, this level is expected to increase slightly over the next few years. The health services sector is very popular with women, who account for more than 80% of the enrolment.

Occupation after graduation

Nearly 80% of the graduates succeeded in finding a job, a significantly higher rate than the two-thirds for secondary vocational graduates taken as a whole. Although four out of five jobs were related to education, the proportion of part-time and temporary jobs was very high, each category accounting for 40% of the jobs obtained.

Occupational profile

This field of study trains students for a limited number of occupations. Three-fifths of employed graduates held positions as assistant nurses and about 10% were working as dental hygienists or dental assistants. A large proportion of students found a job related to their specialty since three-quarters of the employees were working in the general health-care and social services sector.

Salary

In addition to providing good job prospects, this field of study enabled graduates to earn an average salary of $14,300, a higher salary level than the $13,600 earned by secondary vocational graduates taken as a whole.

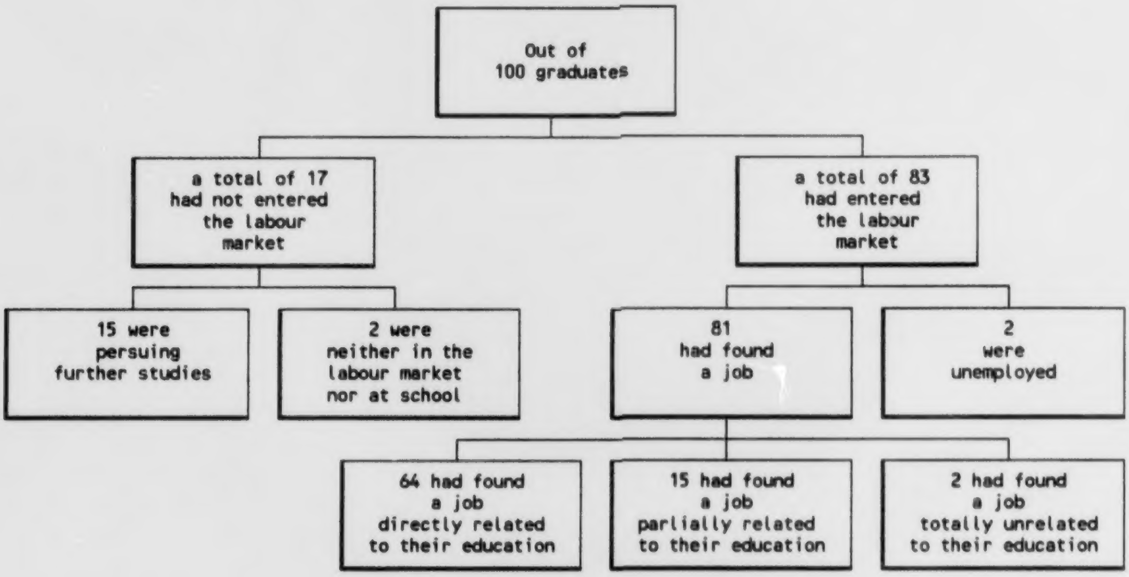
General picture

Whether at the secondary, college or university level, disciplines in the health sector all offer better-than-average opportunities for entering the labour market. These disciplines are also quite well integrated into the different levels of training so that, after entering the labour market, secondary-school candidates can aspire to graduate nursing positions by completing a complementary college program.

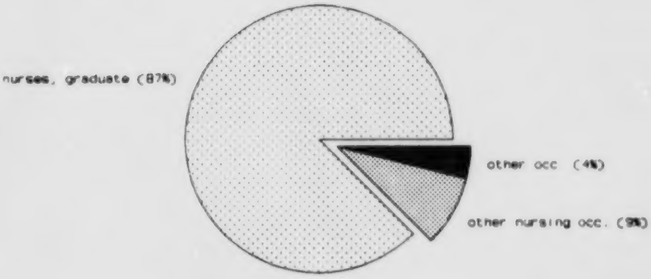
Over the next few years, demand for assistant nurses will continue to be steady, thus helping to maintain the current level of job prospects.

NURSING TECHNOLOGY
VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 17 had not entered the labour market
a total of 83 had entered the labour market
15 were persuing further studies
2 were neither in the labour market nor at school
81 had found a job
2 were unemployed
64 had found a job directly related to their education
15 had found a job parlially related to their education
2 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	1745	12.1	1.0
1985/90	1535	10.8	1.0
1990/95	1400	11.0	1.0
1995/2000	1460	11.0	1.1

MEDICINE AND HEALTH

NURSING TECHNOLOGY
VOCATIONAL COLLEGE DIPLOMA

The program of study in nursing sciences at the college level is available in all Quebec regions. An abridged five-term program is also available to secondary school graduates wishing to complete their education in order to be eligible for graduate nursing positions. To enter nursing, candidates must pass the examination of the Order of Nurses of Quebec.

Trends and projections

Although they are among the most popular occupational choice at the college level, with the third largest number of graduates, nursing sciences recorded a significant drop in popularity throughout the 1980s. In 1977, not less than 22% of the students who graduated in the vocational college sector were in this discipline. This proportion fell from 16% in 1980 to 11% 1988. Even more significant is the fact that this decline translated into an actual drop in the number of graduates which during the same period fell from 2,400 to 1,600 annually. Because of the drop in the number of young people likely to pursue college-level studies, this downward trend in the number of graduates should continue into the next decade, even if the relative portion of the past few years is maintained. If the decline in popularity continues, it will be a much more significant one than the data on the preceding page suggests.

Occupation after graduation

While the proportion of graduates entering the labour market immediately after completing their studies is comparable to the average for the vocational college sector, their placement rate is much higher. According to the 1988 Relance Survey, not less than 96% of nursing sciences graduates active on the labour market one year after graduation held a job. This job was, in a proportion of close to 80%, directly related to education and, in another 17% of cases, partially related to education. Thus, in all, 97% of the jobs obtained had at least a partial relation to education. This result is more positive by far than that of the vocational college graduates taken as a whole.

Occupational profile

Health-care jobs accounted for 97% of the positions held by these graduates one year after they completed their studies. The group of graduate nurses alone accounted for 87% of these jobs.

Salary

The average annual salary of respondents to the survey who were working full time was $22,300 in 1988. This salary level placed these graduates in the category of best-paid workers at the college level.

General picture

The decline in the number of enrolments in this discipline has resulted in a significant shortage of nurses on the market and has made entry into the labour market easier. This desertion has a lot to do with work conditions which are considered difficult in the hospital milieu. In particular, evening, night and weekend work as well as part-time and temporary jobs are frequent.

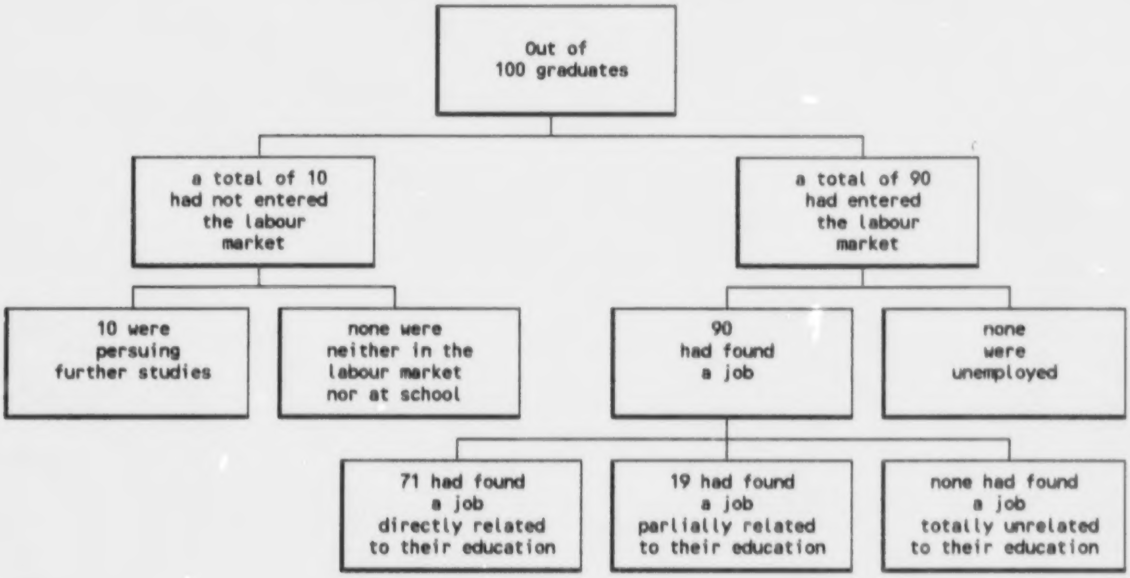
Over the next few years, opportunities for entering the labour market should remain good, while the general picture indicates that shortages of graduate nurses will continue.

NURSING

MEDICINE AND HEALTH

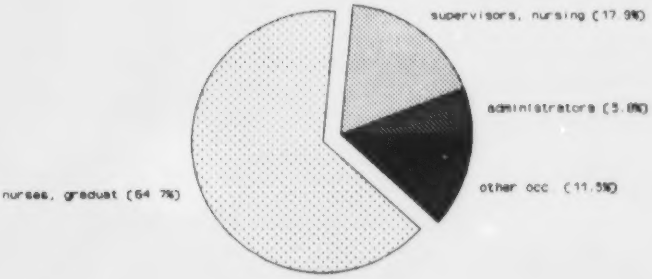
BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 10 had not entered the labour market
a total of 90 had entered the labour market
10 were persuing further studies
none were neither in the labour market nor at school
90 had found a job
none were unemployed
71 had found a job directly related to their education
19 had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	360	1.6	1.4
1985/90	630	2.5	1.0
1990/95	675	2.6	0.9
1995/2000	675	2.6	1.0

MEDICINE AND HEALTH

NURSING

BACHELOR'S DEGREE

This field of study includes such specialties as care of the disabled, geriatric, obstetric and pediatric nursing, and public health nursing. Laval, McGill and Montréal, as well as most of the campuses of the University of Quebec, offer programs in one or another of these disciplines. Admission requirements vary, but a college diploma in nursing and some work experience are generally required.

Trends and projections

The popularity of this field of study increased markedly in the 1980s. From 250 graduates in 1980, the number had reached more than 600 in 1989. This rise can be explained in large part by the desire of many nurses to improve their working conditions by being promoted to more senior or specialized positions. During the 1990s, the number of graduates is expected to remain high, but not increase at such a fast rate. An average of 675 nurses are expected to graduate each year during the next decade.

Occupation after graduation

An above average proportion of graduates enter the labour market after graduation. There is a closer link between education and work than the average.

Occupational profile

The nursing occupations account by far for the greatest number of jobs. According to the graduate survey, 65% of these are jobs as registered nurses and nearly 20% as head nurses.

Salary

The average annual salary of respondents to the 1988 survey was $32,600. This is 20% higher than the average for graduates with bachelor's degrees taken as a whole.

General picture

The above information points to labour market entry conditions more favourable than the average for graduates with first degrees, in terms of both placement and salary. This can be explained in part, however, by the fact that most of these graduates have previous work experience in their chosen field, unlike graduates in other disciplines. Moreover, the recent shortage of registered nurses means easier access. An above average proportion of these graduates said they would make the same academic choice.

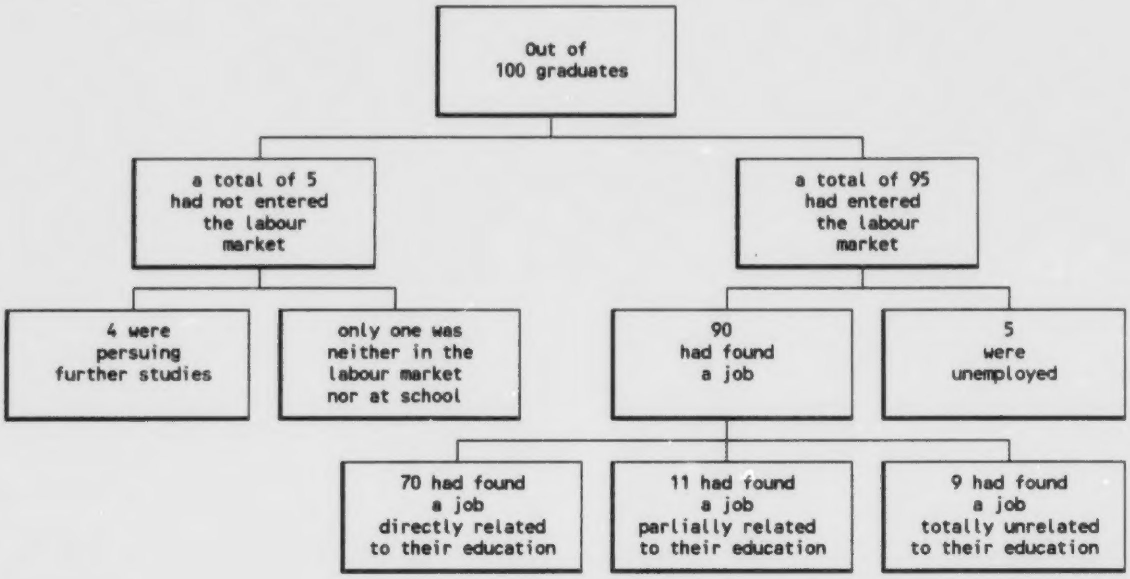
During the 1990s, these graduates will continue to enjoy job prospects better than the average for graduates with bachelor's degrees, since indications are that the shortages will persist, at least locally.

MEDICAL LABORATORY TECHNOLOGY

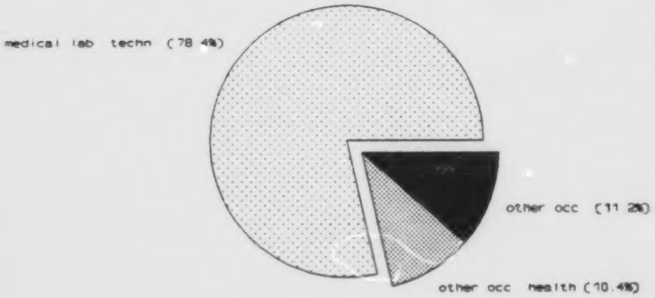
MEDICINE AND HEALTH

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 5 had not entered the labour market
a total of 95 had entered the labour market
4 were persuing further studies
only one was neither in the labour market nor at school
90 had found a job
5 were unemployed
70 had found a job directly related to their education
11 had found a job parlially related to their education
9 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	200	1.4	0.8
1985/90	190	1.3	1.0
1990/95	180	1.4	0.8
1995/2000	185	1.4	1.0

MEDICINE AND HEALTH

MEDICAL LABORATORY TECHNOLOGY
VOCATIONAL COLLEGE DIPLOMA

This program of study is available in eight out of twelve regions. Only the Abitibi, North Shore, Gaspé and Outaouais regions were not offering this program in 1989-90.

Trends and projections

Like most health-related technologies at the college level, the popularity of this field saw a marked decline over the last decade. Representing nearly 3% of graduates in the vocational college sector at the end of the 1970s, these graduates accounted for only 1.4% of the total ten years later. The drop in popularity has nevertheless stabilized somewhat since 1986, the year in which the lowest point was reached with barely 1% of vocational college students graduating in this discipline. If this discipline maintains its current popularity, between 160 and 180 students are expected to graduate over the next decade.

Occupation after graduation

With a placement rate of the order of 95%, it is not surprising to note the very high proportion of graduates who entered the labour market immediately after completing their studies. About 75% of respondents to the Relance Survey indicated that they performed duties directly related to their education, representing a clearly greater than average proportion. However, a large number of the jobs obtained were part time in 40% of cases or on a temporary basis in 60% of cases.

Occupational profile

The direct nature of the relation between education and work is aptly reflected in the profile of the jobs obtained. Thus, 78% of employed graduates were working as medical laboratory technicians. Other occupational groups in the area of health such as prosthetists, orthotists and electrocardiography and electroencephalography technicians also provided a means of entry into the labour market. The health and social services sector is, naturally, the main employer of these graduates since nearly 85% of those who held jobs were working in this sector.

Salary

The average annual salary of respondents to the 1988 Relance Survey who were working full time was $20,300. This salary level was nearly 15% higher than that of vocational college graduates taken as a whole.

General picture

Over the last few years, graduates in this discipline had far better opportunities for entering the labour force than most vocational college graduates and even university graduates with bachelor's degrees. The decline in the school population in this discipline has given rise to specialized labour shortages, which gives these graduates a marked advantage on the market. Even if numerous jobs are offered on a temporary basis, possibilities remain excellent in the longer term.

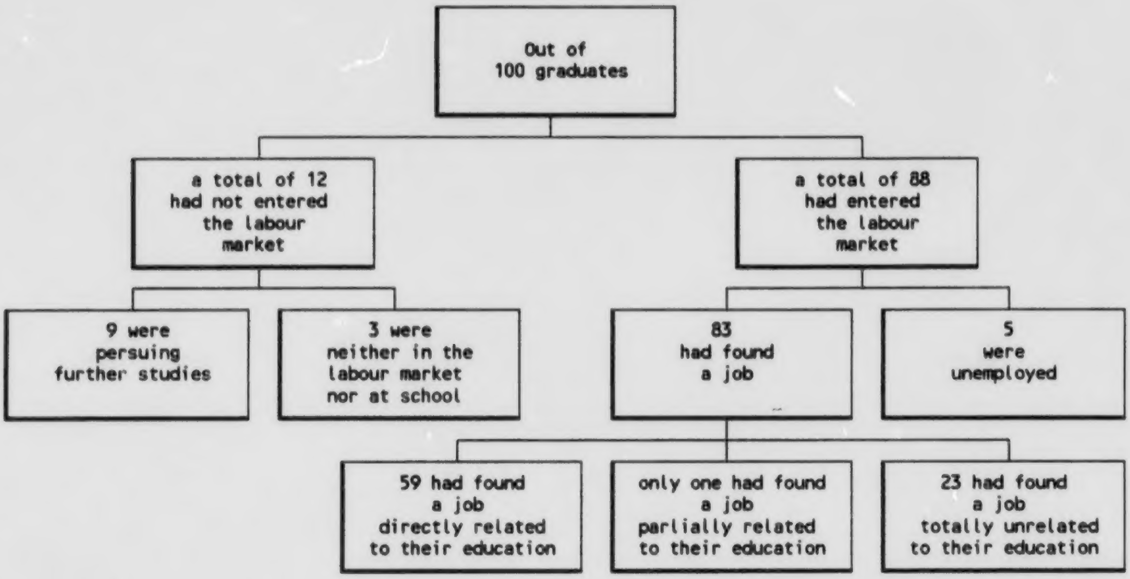
Over the next few years, the requirement growth for medical laboratory technicians is expected to benefit from the introduction of new diagnostic and treatment technologies. Given the expected drop in the college population, continued shortages of qualified labour are expected in this sector. The market outlook for these graduates should therefore remain better than average.

RADIOLOGY TECHNOLOGY

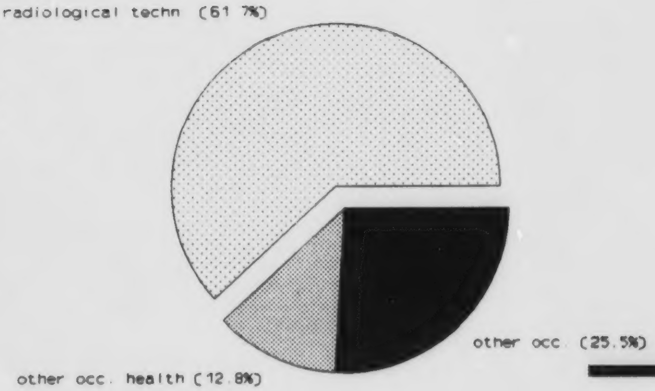
MEDICINE AND HEALTH

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 12 had not entered the labour market
a total of 88 had entered the labour market
9 were persuing further studies
3 were neither in the labour market nor at school
83 had found a job
5 were unemployed
59 had found a job directly related to their education
only one had found a job parlially related to their education
23 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	150	1.0	0.1
1985/90	160	1.1	1.0
1990/95	135	1.1	1.0
1995/2000	140	1.1	1.2

MEDICINE AND HEALTH

RADIOLOGY TECHNOLOGY
VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses the specialties of radiodiagnosis, radiotherapy and nuclear medicine. These disciplines are offered in a limited number of college institutions, mainly in the Montreal and Quebec City regions.

Trends and projections

Although these disciplines experienced recruitment difficulties in the mid 1980s, the decline in the number of graduates has been less dramatic and sustained than that experienced in the nursing disciplines. The 150 students who graduated at the end of the last decade compares very favourably to the number of students who graduated in 1980. Over the next few years, between 130 and 140 students are expected to graduate each year if the discipline maintains its current popularity.

Occupation after graduation

Like all health science technologies, a higher than average number of graduates had entered the labour market one year after completing their studies. More than 65% of employed graduates had found a job that was at least partially related to their education. Although slightly lower than other health technologies, these results compared favourably to those obtained for most of the vocational college graduates.

Occupational profile

Nearly 75% of the jobs obtained by these graduates were directly related to health occupations. More particularly, the job of radiology technician was the most frequently encountered one year after graduation. In the case of graduates who were not working in the health sector one year after completing their studies, the secretarial and sales occupational groups constituted, as for other young people, the most frequent means of entry into the labour market.

Salary

The average annual salary of the graduates who were employed full time one year after graduation was $17,900. Although lower than that of other graduates in health technologies, it was nonetheless comparable to that of vocational college graduates taken as a whole.

General picture

Opportunities for entering the labour market in jobs directly related to education were higher than average in recent years. However, easier entry into the labour market was somewhat overshadowed by the fact that a large proportion of candidates had to accept jobs on a temporary or part-time basis at the beginning of their careers.

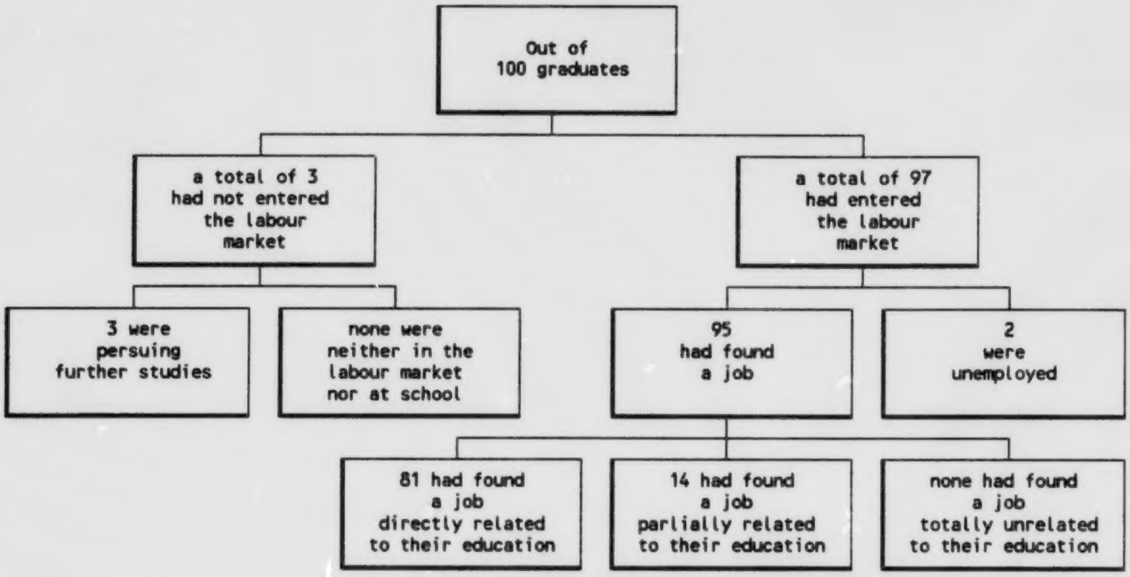
As for medical laboratory technicians, requirement growth for radiology technicians will continue to benefit from the development of diagnostic and treatment technologies. The general employment outlook for these graduates is expected to remain excellent.

DENTAL ASSISTANT TECHNOLOGY

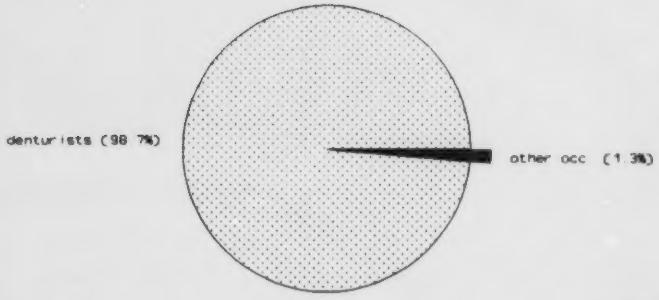
VOCATIONAL COLLEGE DIPLOMA

MEDICINE AND HEALTH

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 3 had not entered the labour market
a total of 97 had entered the labour market
3 were persuing further studies
none were neither in the labour market nor at school
95 had found a job
2 were unemployed
81 had found a job directly related to their education
14 had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	130	0.9	0.9
1985/90	165	1.2	1.0
1990/95	155	1.2	1.1
1995/2000	160	1.2	1.1

DENTAL ASSISTANT TECHNOLOGY
VOCATIONAL COLLEGE DIPLOMA

The Montreal, Quebec City, Saguenay-Lac St-Jean, Montérégie, Mauricie-Bois-Francs and Outaouais regions all offer a dental hygiene program at the college level.

Trends and projections

After losing a certain amount of popularity at the beginning of the 1980s, this discipline recorded a slight recovery over the second half of the decade and saw its number of graduates increase over the last few years. Between 150 and 160 students will graduate each year during the next decade if the popularity of the last few years continues.

Occupation after graduation

A very large majority of these graduates enter the labour market immediately after completing their studies. According to the 1988 Relance Survey, the placement rate for these graduates one year after graduation was 98% and most of the jobs obtained were, according to the respondents, directly related to their education. Contrary to other health science graduates at the college level, very few of these graduates held part-time or temporary jobs.

Occupational profile

At the time of the survey, a large majority of respondents held jobs in the category of denturology, which includes hygienists and dental assistants.

Salary

The average annual salary of graduates in dental hygiene who were employed full time one year after graduation was $18,400 in 1988. This level is slightly higher than that of the vocational college sector.

General picture

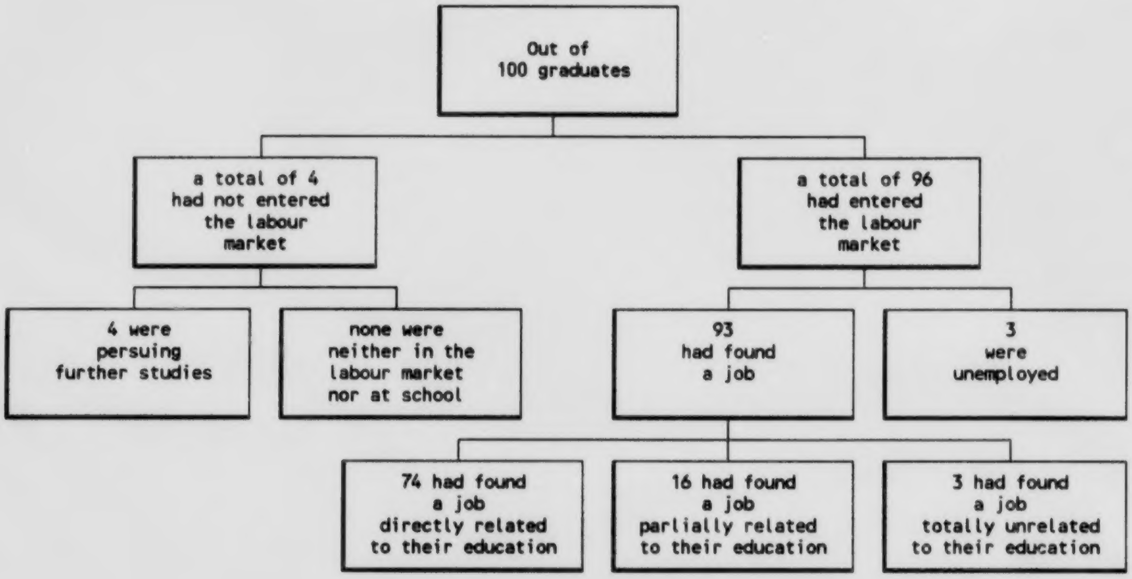
Opportunities for entering the labour market in jobs directly related to education are among the best at the college level. The exceptional placement rate in this discipline is a good indicator of shortages of qualified labour. These shortages are nonetheless partly attributable to the high turnover rate among these workers. Over the next few years, opportunities for entering the labour market should remain excellent. Graduates will nonetheless have to adjust to evening work, which is very frequent in this occupation.

OTHER DIAGNOSTIC TECHNOLOGIES

VOCATIONAL COLLEGE DIPLOMA

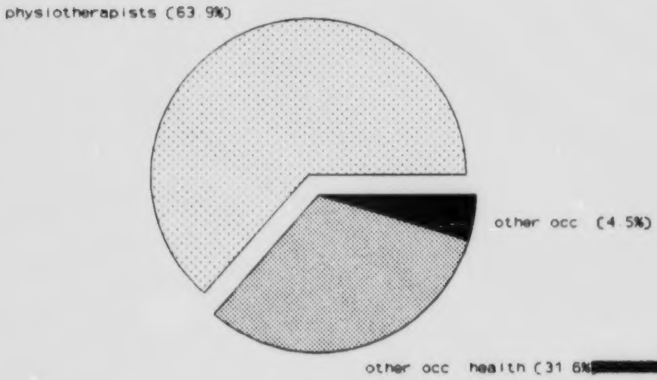
MEDICINE AND HEALTH

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 4 had not entered the labour market
a total of 96 had entered the labour market
4 were persuing further studies
none were neither in the labour market nor at school
93 had found a job
3 were unemployed
74 had found a job directly related to their education
16 had found a job parlially related to their education
3 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	135	0.9	1.0
1985/90	150	1.1	1.0
1990/95	140	1.1	1.0
1995/2000	145	1.1	1.2

MEDICINE AND HEALTH

OTHER DIAGNOSTIC TECHNOLOGIES
VOCATIONAL COLLEGE DIPLOMA

The specialties offered in this discipline are respiratory and rehabilitation technologies. These programs are available primarily in certain institutions in the Eastern Townships, Montreal and Saguenay-Lac St-Jean regions.

Trends and projections

In the 1980s, the number of graduates in these disciplines remained more constant than that of other health technologies. If they maintain their relative importance in the vocational college sector, the annual number of graduates will be around 140 until the year 2000.

Occupation after graduation

Due to a very low unemployment rate compared to the average, most of these graduates enter the labour market immediately after completing their studies. According to the Relance Survey, less than 5% of these graduates were pursuing further studies one year after graduation, compared to 16% on average. Moreover, a much higher than average proportion of the jobs obtained are directly related to education. In fact, more than 97% of the employed graduates considered their duties at least partially related to their education. Nearly 80% of the jobs were full time, a greater proportion than in other health disciplines. However, temporary jobs were just as frequent.

Occupational profile

The occupational groups in the area of health accounted for at least 96% of the jobs held by these graduates. In this respect, the group of physiotherapists provided the most openings and accounted for 65% of the jobs.

Salary

The average annual salary of graduates who were working full time one year after graduation was about $21,500 in 1988. Although comparable to that of graduates in other health disciplines, it was clearly higher than that of vocational college graduates taken as a whole.

General picture

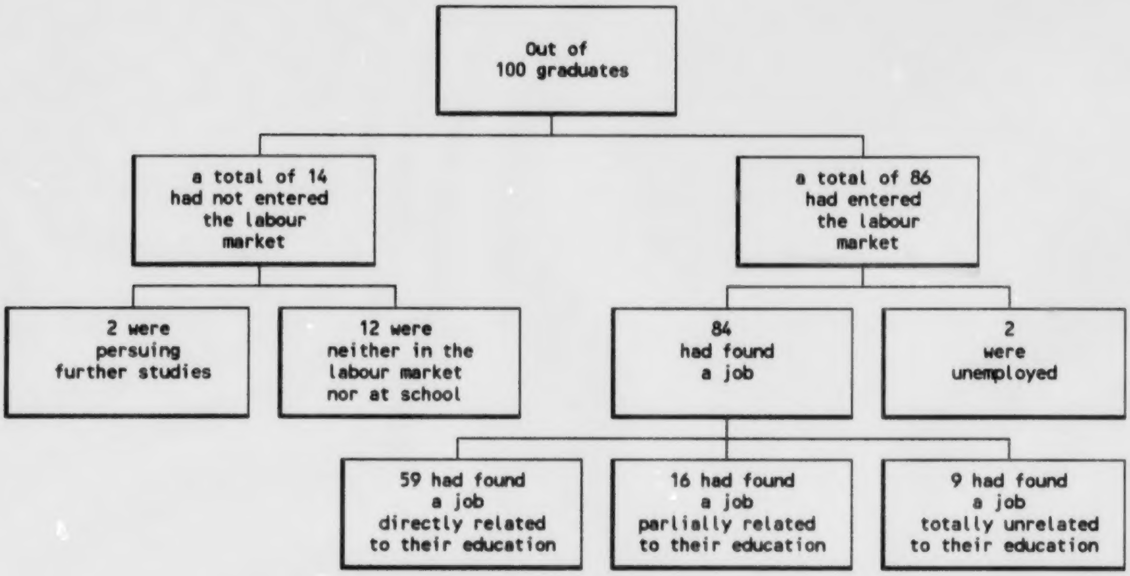
In the short term, employment opportunities for these graduates are among the most favourable, although shortages are noted in some regions. The unemployment rate in this field is very low and occupational mobility makes it easier for these young people to enter the occupation.

In the longer term, the high number of graduates and the more stringent constraints on the reimbursement of physiotherapeutic care by the Régime d'assurance-maladie du Quebec could cause the market to shrink somewhat for these professionals during the projected period. However, the outlook for respiratory assistance technicians remains good.

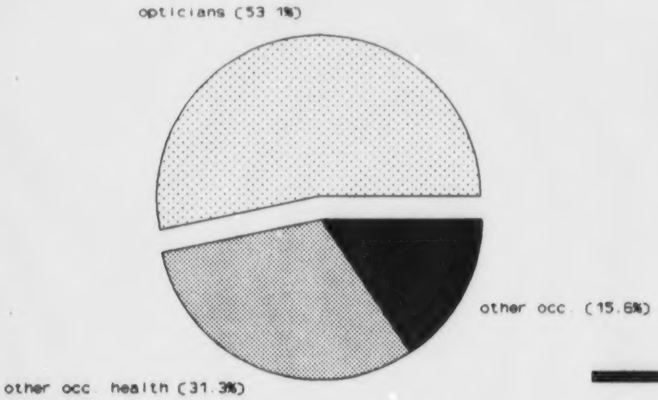
MEDICAL EQUIPMENT TECHNOLOGIES **MEDICINE AND HEALTH**

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 14 had not entered the labour market
a total of 86 had entered the labour market
2 were persuing further studies
12 were neither in the labour market nor at school
84 had found a job
2 were unemployed
59 had found a job directly related to their education
16 had found a job parlially related to their education
9 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	40	0.3	1.8
1985/90	45	0.3	1.0
1990/95	40	0.3	0.9
1995/2000	45	0.3	1.1

MEDICAL EQUIPMENT TECHNOLOGIES
VOCATIONAL COLLEGE DIPLOMA

This field of training encompasses the specialization of hearing, seeing and dental prostheses and ortheses development. This training is offered in only a limited number of institutions in the greater Montreal region, namely the Edouard-Montpetit, Montmorency and Rosemont Cegeps.

Trends and projections

These technologies were not affected by the decline in the number of graduates as were other health-related disciplines. As in the last few years, an average of 40 to 50 students should graduate over the next decade.

Occupation after graduation

According to the Relance Survey, a proportionally lower number of graduates in this discipline pursued their studies after graduation, preferring instead to enter the labour force immediately. For a number of them, this decision was motivated by a high placement rate of 98% of the graduates who were active on the labour market. Although in a less direct fashion than for other categories of workers employed in any of the health sectors, the relation between education and work compared favourably to the average for all college disciplines. In fact, at least 90% of the graduates who were employed one year after completing their studies indicated that they were performing duties that were at least partially related to their education. In most cases, the jobs obtained were permanent and full time.

Occupational profile

Nearly 90% of graduates who were employed one year after graduation were working in the general group of health professionals. The group of dispensing opticians was the largest, accounting for 55% of the jobs obtained. The groups of prosthetists and orthotists, prostheses-ortheses technicians and ocularists accounted for 17% of the jobs reported by graduates.

Salary

The average annual salary of respondents to the survey who were working full time one year after completing their studies was $21,000 in 1988.

General picture

The rapid growth of "optometry clinics" combining eye tests and opticians' laboratories has given rise to a large number of openings for dispensing opticians over the last few years. For their part, other ortheses and prostheses professionals have benefited from significant technical development, whether with respect to new products or materials or the development of sports medicine which is increasingly expanding beyond the limits of elite sports.

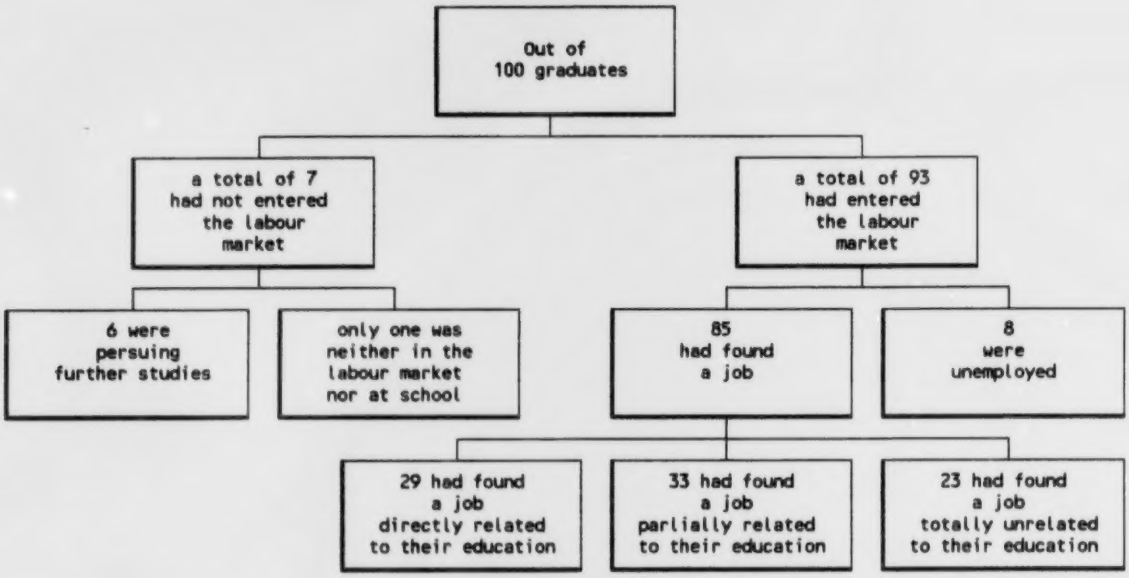
Although a slowdown in the requirement growth for opticians is expected over the next few years, employment prospects in related occupations should remain higher than the average of other college disciplines.

OTHER HEALTH TECHNOLOGIES

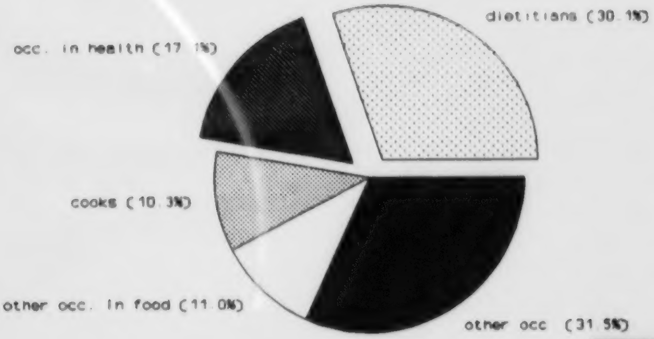
VOCATIONAL COLLEGE DIPLOMA

MEDICINE AND HEALTH

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 7 had not entered the labour market
a total of 93 had entered the labour market
6 were persuing further studies
only one was neither in the labour market nor at school
85 had found a job
8 were unemployed
29 had found a job directly related to their education
33 had found a job partially related to their education
23 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	185	1.2	1.0
1985/90	205	1.4	1.0
1990/95	185	1.5	1.0
1995/2000	195	1.5	1.2

OTHER HEALTH TECHNOLOGIES
VOCATIONAL COLLEGE DIPLOMA

Most of these graduates studied dietetic technology, a program available in seven out of twelve regions: Lower St. Lawrence, Laval-Laurentides-Lanaudière, Mauricie-Bois-Francs, Montérégie, Montreal, Quebec City and Saguenay-Lac St-Jean. Programs in cytotechnology and electrophysiology are also offered in the Montreal and Quebec City regions.

Trends and projections

The popularity of this field of training slipped at the beginning of the 1980s when the relative number of graduates decreased from 2% in 1977 to 1% in 1981. This trend reversed as of 1983-84 and the number of graduates reached 1.5% at the end of the decade. If the current trend continues over the next few years, some 190 students will graduate each year from the various college institutions.

Occupation after graduation

According to the 1988 Relance Survey, the placement outlook in related occupations was excellent. Thus, 91% of the graduates who chose to enter the labour force were employed in the following year. This placement rate compares favourably to that of university graduates in dietetic sciences. Although the jobs were less directly related to education than the jobs of their university colleagues, the proportion of related jobs was comparable to the average for the college level. However, quite a high proportion of part-time and temporary jobs were noted.

Occupational profile

The occupational profile of graduates in these disciplines is quite diverse. About 50% of these graduates (30% for dieticians) were employed in occupational categories in the health sector. A significant proportion, however, were working as chefs and cooks (10%). The food processing sector also provided employment opportunities for these graduates, notably as food inspectors and, to a lesser extent, as foremen/women or food-service supervisors.

Salary

The average annual salary reported by respondents to the 1988 Relance Survey who were working full time was $16,400. This level was slightly lower than the $17,700 average for vocational college graduates.

General picture

As noted in the occupational profile of these graduates, there is a certain amount of competition from university graduates. In this respect, college graduates managed quite well, and even entered the labour force in larger numbers than their university counterparts. Entry into the labour market requires a search for employment in very diverse sectors. In particular, hospitals, teaching institutions, daycare centres, food-processing plants, lodging and restaurant establishments should not be overlooked in the search for employment.

Over the next few years, the employment outlook for dieticians should shrink somewhat and a labour surplus is anticipated.

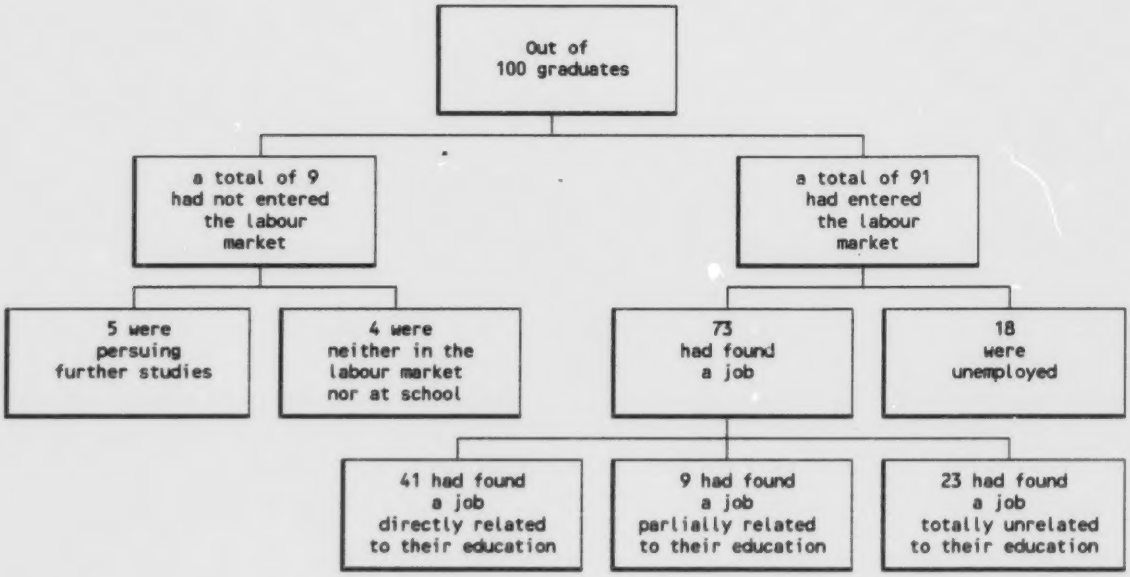
APPLIED SCIENCES

CARPENTRY

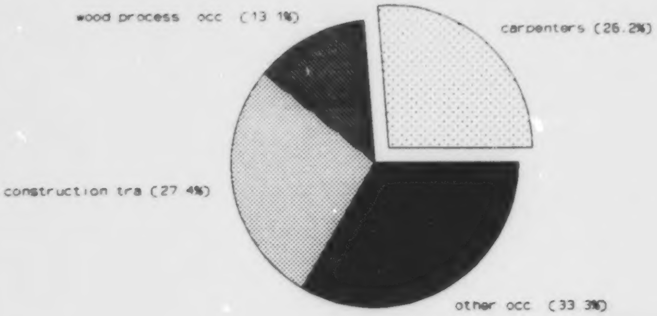
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 9 had not entered the labour market
a total of 91 had entered the labour market
5 were persuing further studies
4 were neither in the labour market nor at school
73 had found a job
18 were unemployed
41 had found a job directly related to their education
9 had found a job parlially related to their education
23 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	255	0.9	0.1
1985/90	55	0.5	1.0
1990/95	35	0.4	0.7
1995/2000	35	0.4	0.1

This field of study provides training for construction workers specializing in carpentry and woodworking.

Trends and projections

Although this field of study produced many graduates in the past, -more then 250 annually in the early 1980s - it has lost a great deal of popularity, as have many other secondary vocational fields of study. In recent years, there have been only about 55 graduates each year, a number which could fall even further in the short and medium term.

Occupation after graduation

The situation of these graduates on the labour market one year after graduation closely resembles the overall situation of secondary vocational graduates. The employment rate was 73% and two-thirds of the jobs obtained were directly or at least partially related to education. For the most part, graduates were working in permanent full-time jobs. Unemployment was nonetheless high among those who were in the labour force, reaching a rate of nearly 20%, the same level as that of secondary graduates taken as a whole.

Occupational profile

More than half of the graduates were working in jobs related to the construction sector, especially as carpenters, masons and unskilled workers. Another group of graduates, accounting for less than 15% of the jobs, were working in occupations related to the wood and furniture industries as cabinetmakers and workers.

Salary

At $17,800, the average annual salary of employed graduates is among the highest of all secondary vocational graduates who, overall, earned an average salary of only $13,600 in 1988.

General picture

The construction industry is marked by considerable cyclical variations. Demand for carpenters is largely dependent on residential construction which experienced a slump in 1989 and 1990, after the record years of 1986, 1987 and 1988. When interpreting placement statistics for these graduates it should be kept in mind that 1988 was a very favourable year for the residential construction industry. In this respect, graduates searching for first jobs in the 1990s could face a very competitive labour market.

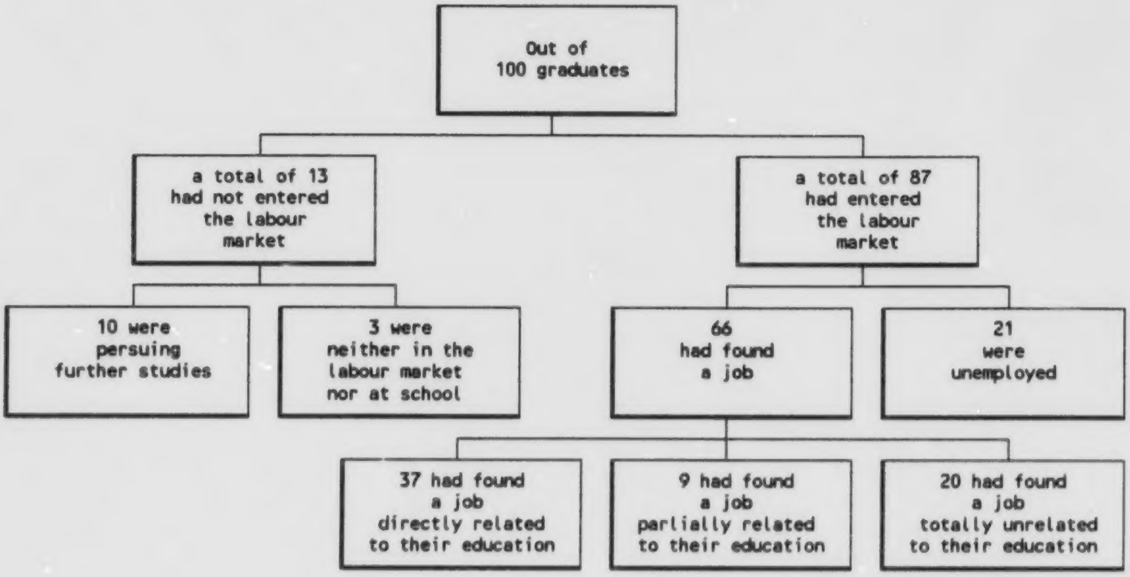
The high turnover rate in carpentry, however, makes it easier for new workers to enter the labour market. During the 1990s, entry of these graduates into the labour market should also be favoured by the new law governing construction trades which limits access to these occupations to candidates with vocational training.

ELECTRICITY

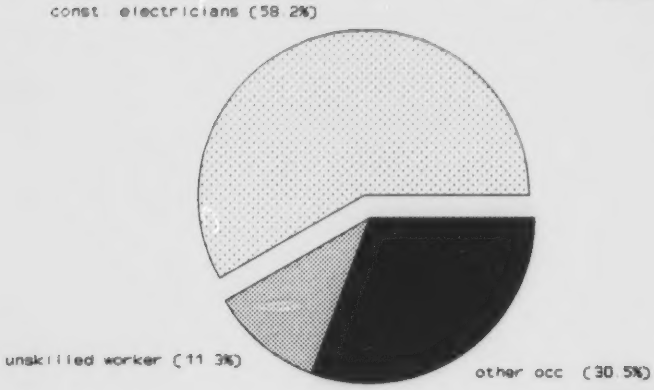
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 13 had not entered the labour market
a total of 87 had entered the labour market
10 were persuing further studies
3 were neither in the labour market nor at school
66 had found a job
21 were unemployed
37 had found a job directly related to their education
9 had found a job partially related to their education
20 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	345	1.2	---
1985/90	90	0.8	---
1990/95	60	0.7	---
1995/2000	65	0.7	---

This vocational sector includes programs in construction electricity, industrial wiring maintenance, electrical drafting estimation and assembly of wiring installations.

Trends and projections

- Although very popular in past years, - nearly 350 graduates each year in the first half of the decade - disciplines in the field of electricity have recently lost much of their appeal so that, on average, just under 100 students have graduated each year during the 1985-1990 period. If the recent trend continues, this number could well drop even more over the next few years to reach an average of only 60 to 65 graduates annually.

Occupation after graduation

Two-thirds of the 1987 graduates were employed at the time of the 1988 survey and a little more than one-fifth were unemployed. One-third of the workers had decided to accept jobs that were unrelated to their education. Of the employed graduates, a significant proportion, i.e. 17%, held temporary jobs.

Occupational Profile

Most of the workers (58%) were working as mechanics. Another group, accounting for more than 10% of those employed, were working as unskilled workers in various industries. Overall, nearly three out of five employees were working in the construction sector.

Salary

Survey respondents reported an average annual salary of $18,200, the second highest salary level of all the graduate groups. Also, this salary is nearly $5,000 higher than that of secondary graduates taken as a whole.

General picture

Compared to other construction occupations, the turnover rate among electricians is not as high and the average age is lower. These two factors combined largely explain the lower demand for these professionals. Despite everything, placement of graduates in related jobs was comparable to the average of secondary vocational graduates.

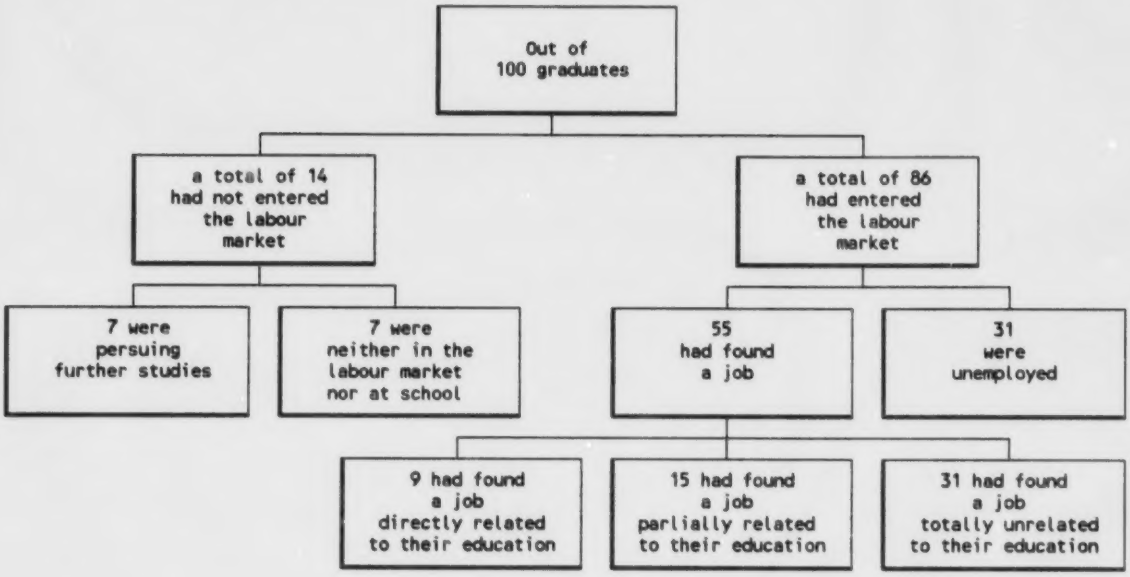
Over the next few years, graduates in this field should continue to enjoy employment opportunities comparable to those recorded in recent years. As in the 1980s, a large proportion of the demand will be for maintenance electricians outside the construction sector.

WOODWORKING

SECONDARY VOCATIONAL

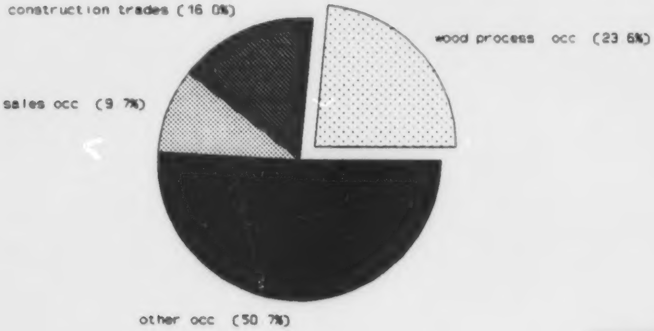
APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 14
had not entered
the labour
market
a total of 86
had entered
the labour
market
7 were
persuing
further studies
7 were
neither in the
labour market
nor at school
55
had found
a job
31
were
unemployed
9 had found
a job
directly related
to their education
15 had found
a job
parlially related
to their education
31 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



**TRENDS IN NUMBER OF GRADUATES
AND MARKET OUTLOOK**

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	375	1.3	0.1
1985/90	125	1.1	1.0
1990/95	85	0.9	0.4
1995/2000	90	0.9	0.5

WOODWORKING
SECONDARY VOCATIONAL

This field of studies trains shop carpenters, layout carpenters and prefabrication carpenters.

Trends and projections

Woodworking is among the fields of study which in the second half of the 1980s saw its number of graduates decrease by more than 250. The 120 students who graduate each year, however, account for slightly more than 1% of the total number of graduates from all the secondary vocational education programs.

Occupation after graduation

The 1988 Relance Survey paints a bleak picture of the market outlook for woodworkers who graduated in 1987. Barely more than half (55%) of them had found a job one year after graduation and about one-third were unemployed, a proportion almost double that of graduates taken as a whole. Moreover, one-half (55%) of the employed graduates were working in jobs that were not related to their education.

Occupational profile

Given that a high proportion of woodworking graduates hold jobs that have very little relation to their school training, their occupational profile includes a wide range of different occupations (more than 40) in a large number of economic sectors. About 40% of employed graduates were working as cabinetmakers or workers in the treatment or manufacturing and repair of woodwoork in various construction occupations, particularly as unskilled workers. Woodworking graduates' participation in a few different occupations is offset by the fact that 37% of employed graduates were working in the wood, furniture and construction sectors.

Salary

The salary of woodworking graduates reflected the difficult market conditions since they were earning a salary of $12,000, i.e. about $1,600 less than the average salary of secondary vocational graduates taken as a whole.

General picture

The placement situation for these graduates is among the poorest of the secondary vocational sector. The advanced mechanization of the manufacturing of furniture, kitchen cabinets as well as wood panelling, wainscotting and trim has certainly contributed to reducing demand for these professionals over the past few years. In this respect, candidates who are more familiar with automated woodworking machinery have a marked advantage in the labour market. Nonetheless, specialized jobs involving the installation of cabinets, windows or other types of woodwork appear to offer additional job prospects for these graduates.

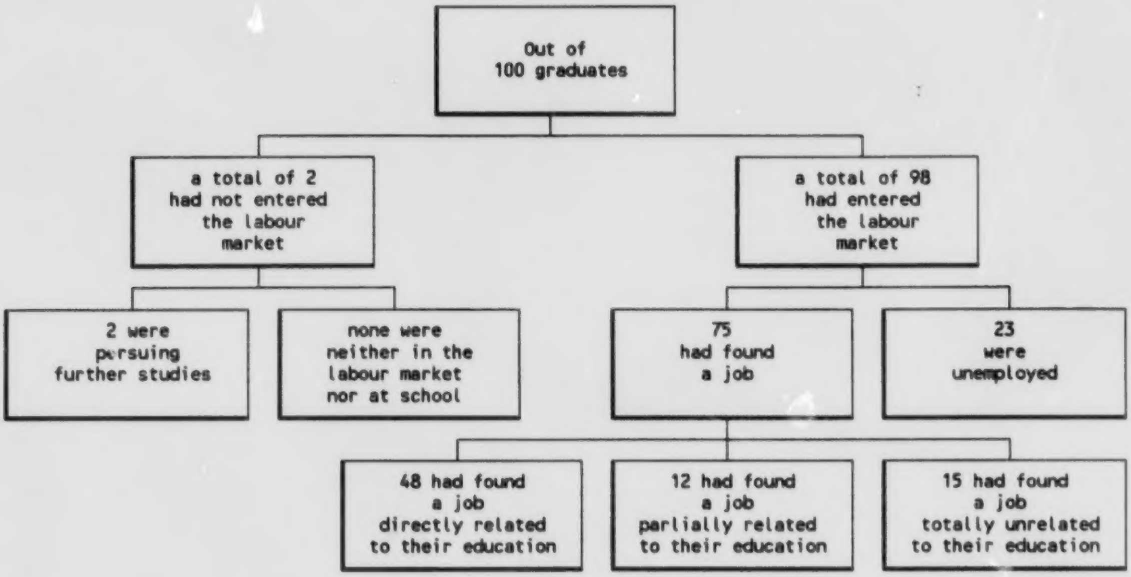
As for carpenters, demand for these workers tends to grow at the same rate as residential construction. After the high activity level of previous years, the number of construction projects undertaken in 1989 and 1990 dropped considerably. The level of construction activity is expected to rise during the first half of the 1990s, but still will not reach the record levels of 1986, 1987 and 1988.

PLUMBING AND HEATING

SECONDARY VOCATIONAL

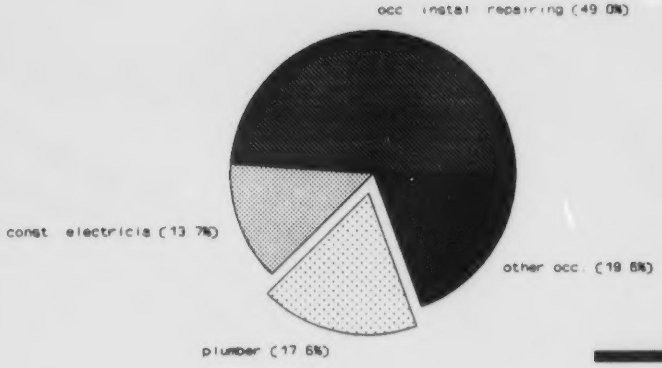
APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 2 had not entered the labour market
a total of 98 had entered the labour market
2 were persuing further studies
none were neither in the labour market nor at school
75 had found a job
23 were unemployed
48 had found a job directly related to their education
12 had found a job parlially related to their education
15 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	105	0.4	0.1
1985/90	35	0.3	1.0
1990/95	25	0.2	0.8
1995/2000	25	0.2	0.4

PLUMBING AND HEATING
SECONDARY VOCATIONAL

This field of study includes training programs for plumbing and heating mechanics and helpers, pipefitters and installers and mechanics of refrigeration and air-conditioning units.

Trends and projections

This field of study has experienced more or less the same decline as all other secondary vocational disciplines by losing more than half its enrolment in the second half of the 1980s. Over the next ten years, the number of graduates should hover around an average of 25 per year.

Occupation after graduation

Graduates in the field of plumbing and heating recorded both an above-average employment rate (75%) and a slightly higher unemployment rate (23%) than graduates taken as whole. Four out of five workers found jobs with requirements that were directly or partially related to their vocational training. It should be noted that most of the jobs were full time and permanent.

Occupational profile

About half of the jobs were in the occupational groups of installers of electrical and electronic units, while another third were working as mechanics, plumbers or unskilled workers in the area of electrical equipment.

Salary

Although a complete range of the salaries earned is not available, the salaries of these workers varied between $14,000 for installers of heating units and $19,500 for electricians.

General picture

Like other graduates in disciplines related to the construction trades, these graduates should benefit over the next few years from the law reform concerning training in construction trades. Moreover, regular activity in non-residential construction has kept the demand steady for this category of workers. Finally, the inroads made by air-conditioning products into the residential market has greatly contributed to the creation of new job openings, often outside the construction sector per se.

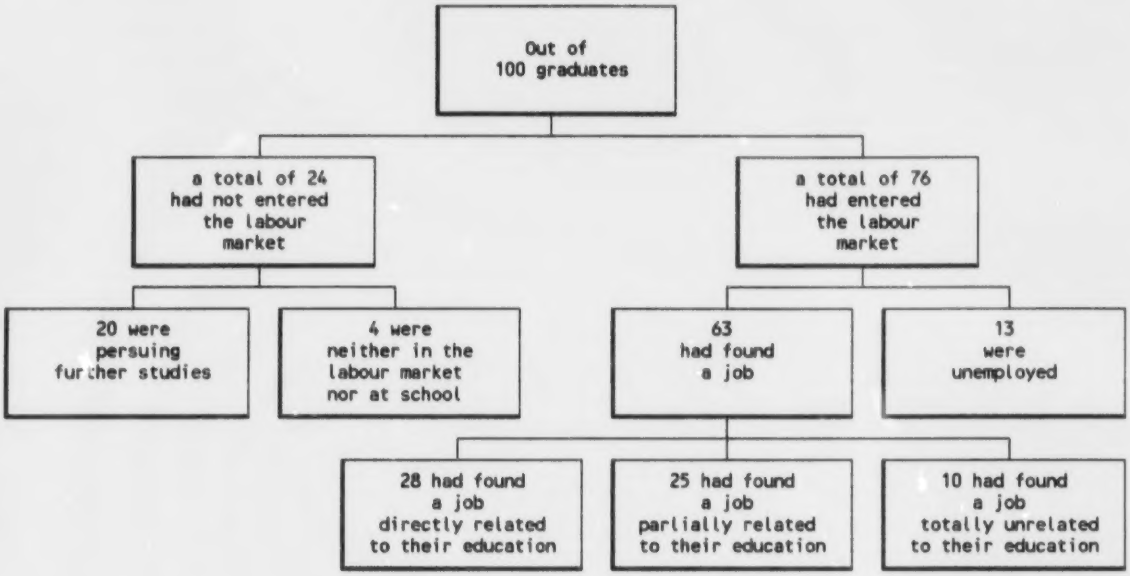
Over the next few years, the placement outlook in related trades is expected to remain above average.

CIVIL ENGINEERING TECHNOLOGIES

APPLIED SCIENCES

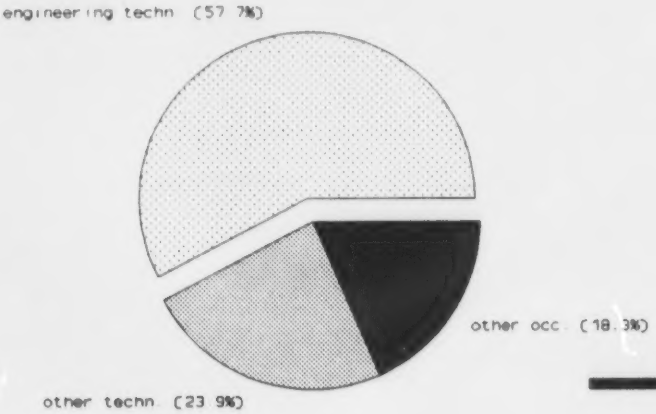
VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 24 had not entered the labour market
a total of 76 had entered the labour market
20 were persuing further studies
4 were neither in the labour market nor at school
63 had found a job
13 were unemployed
28 had found a job directly related to their education
25 had found a job partially related to their education
10 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	345	2.3	0.1
1985/90	210	1.5	1.0
1990/95	180	1.4	0.8
1995/2000	190	1.4	0.7

APPLIED SCIENCES

CIVIL ENGINEERING TECHNOLOGIES
VOCATIONAL COLLEGE DIPLOMA

Although it is offered by a limited number of institutions, this field of training is available in most Quebec regions with the exception of the Montérégie, Gaspé and Outaouais regions.

Trends and projections

Although very popular in the early 1980s, the popularity of this field of training has declined dramatically since then. From over 3% in 1980, the relative proportion of graduates dipped to 1.9% in 1985 and to 1.4% in 1988. The number of graduates is expected to continue dropping over the 1990s to attain an average of 180 to 190 annually.

Occupation after graduation

A higher than average proportion of graduates decided to continue their studies after graduation. Of those who entered the labour force, the placement rate was 80%, a level lower than that noted for all the disciplines taken as a whole. The relation between education and work was comparable to the average but, given the lower than average participation and placement rates and the high incidence of temporary work, the jobs seemed more difficult to find.

Occupational profile

Nearly 80% of employed graduates were working as technicians, including 58% as engineering technicians, 7% as surveyors and 7% as designers. Compared to physical sciences technologies, entry-level jobs were clearly less related to production tasks. Nevertheless, companies in the manufacturing sector, particularly those involved in transport equipment, metal products, electrical products, paper and plastics provided 90% of the job openings.

Salary

The average salary of $17,500 in 1988 earned by graduates who were working full time one year after graduation was comparable to the average salary of vocational college graduates taken as a whole.

General picture

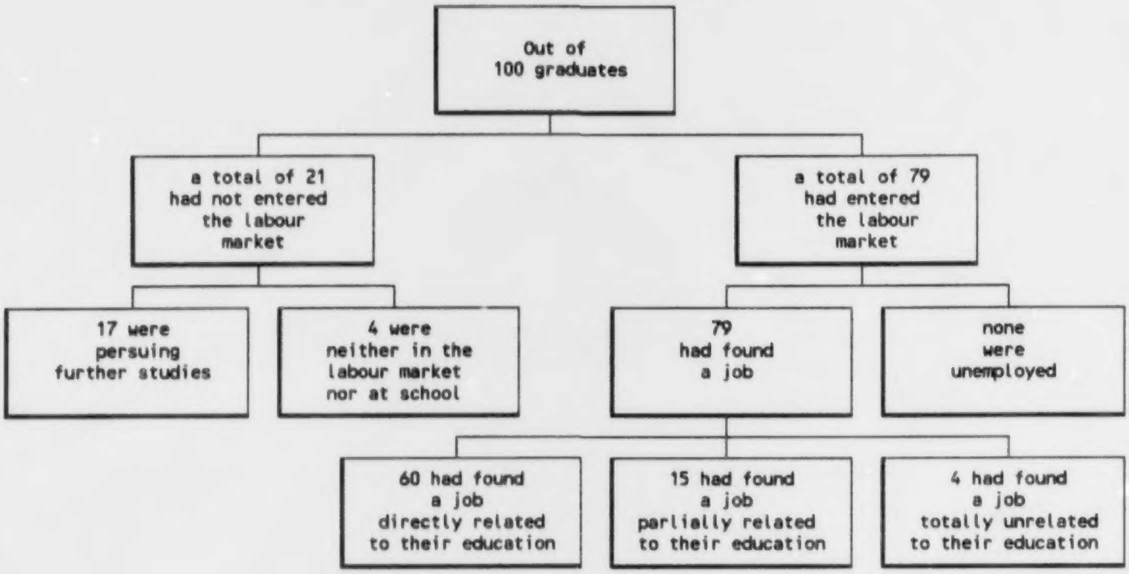
Statistics for this field of training, although not poor, indicate that these graduates face labour market conditions that are more difficult than the average noted for other engineering technologies. Concentration in a limited number of occupational groups appears to limit their opportunities somewhat, compared to the other engineering technologies.

Over the next few years, a slight tightening of the labour market is expected in relation to that of recent years. This will serve to maintain job opportunities at a slightly lower than average level. Employment prospects should nonetheless continue to allow most future graduates to enter the labour market.

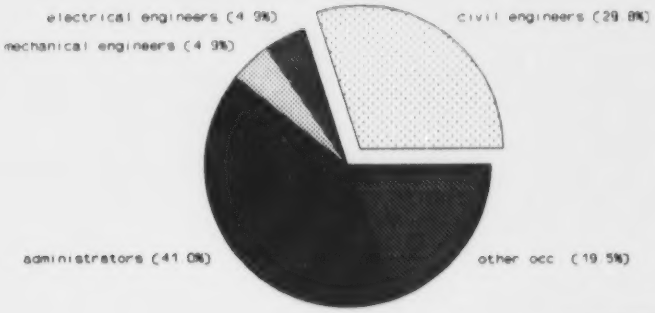
CIVIL ENGINEERING
BACHELOR'S DEGREE

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 21 had not entered the labour market
a total of 79 had entered the labour market
17 were persuing further studies
4 were neither in the labour market nor at school
79 had found a job
none were unemployed
60 had found a job directly related to their education
15 had found a job parlially related to their education
4 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	305	1.4	0.5
1985/90	280	1.1	1.0
1990/95	300	1.2	0.8
1995/2000	300	1.2	0.7

CIVIL ENGINEERING
BACHELOR'S DEGREE

Programs in civil engineering are offered at Concordia, Sherbrooke, Laval and Polytechnique. The prerequisites are mathematics, physics, chemistry and biology, in addition to a Diploma of Collegial Studies or equivalent.

Trends and projections

In comparison with engineering disciplines taken as a whole, the popularity of civil engineering has been declining. While the number of graduates in engineering during the period 1985-90 rose 26% in relation to the preceding five-year period, the number of graduates in [civil] engineering dropped an average of 8%. Over the coming decade, the number of graduates is expected to rise slightly to reach approximately 300 a year.

Occupation after graduation

According to the survey of graduates, the labour market participation rate of graduates in civil engineering was somewhat lower than the average for engineering disciplines in general. The placement rate of those who had entered the labour market, however, compared favourably to the average. Positions in chosen field accounted for more than 90% of jobs held two years after graduation.

Occupational profile

Jobs held by these graduates two years after graduation fit mainly into the two major occupational groups of engineering (50%) and management (40%). Civil engineers were the largest single group represented, with nearly 30% of jobs. A significant number of graduates worked as construction administrators (20%).

Salary

The average salary of survey respondents working full time put them in the higher salary bracket, at $26,600 annually.

General picture

The 1981-82 recession had a major impact on the labour market for these graduates during the first half of the 1980s. Renewed investment in construction in the past few years, especially in major industrial construction, has given a boost to civil engineering and provided job opportunities for younger civil engineers. Overall, however, these graduates were less satisfied with their academic choice than graduates in other engineering disciplines.

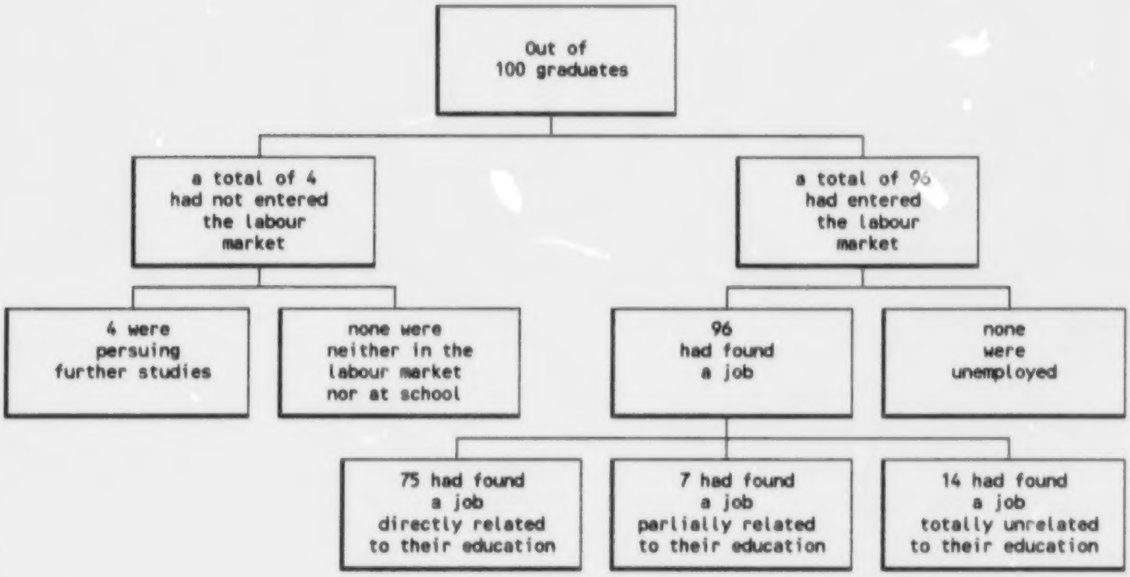
During the 1990s, new hydro-electric projects should support continued growth in requirements, albeit at a rate lower than during the past five years. Growth in requirements should slow down during the second half of the decade, as construction falls off. Overall, one can expect that labour market entry conditions for these graduates will remain better than the average but not as good as in other engineering sectors.

CIVIL ENGINEERING

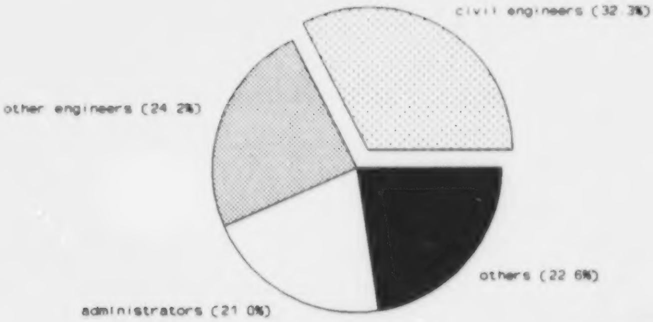
MASTER'S DEGREE AND DOCTORATE

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 4 had not entered the labour market
a total of 96 had entered the labour market
4 were persuing further studies
none were neither in the labour market nor at school
96 had found a job
none were unemployed
75 had found a job directly related to their education
7 had found a job partially related to their education
14 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	90	2.1	0.6
1985/90	110	2.1	1.0
1990/95	105	2.2	1.0
1995/2000	100	2.2	1.0

CIVIL ENGINEERING
MASTER'S DEGREE AND DOCTORATE

Master's and doctoral programs are offered at Concordia, Laval, McGill, Montréal (Polytechnique) and Sherbrooke universities.

Trends and projections

The number of degrees granted annually in this discipline bottomed out in the early 1980s and gradually moved up to reach approximately 100 over the past number of years. Despite a drop in the total number of graduate students, the number of graduate degrees in civil engineering should remain more or less at its present level throughout the coming decade.

Graduates' labour market participation

At more than 95%, the labour market participation rate of these graduates was among the highest. The data from the survey of graduates indicate that they entered the labour market without too much difficulty: all survey respondents had found a job, usually directly related to their education.

Occupational profile

Approximately 60% of employed graduates held engineering jobs, more than half of which were in civil engineering. Management positions accounted for 20% of jobs; teaching, for 8%. A wide range of industries had hired recent graduates, although there was a high concentration of jobs in the consulting engineering and transportation sectors.

Salary

At $36,400, the average annual salary of respondents working full time was comparable with that of graduates with master's degrees or doctorates as a whole.

General picture

As in the case of graduates with bachelor's degrees, the labour market for these graduates quickly recovered from the problems caused by the 1981-82 recession. Placement prospects in this discipline over the past number of years have been better than average, in particular in jobs directly related to education.

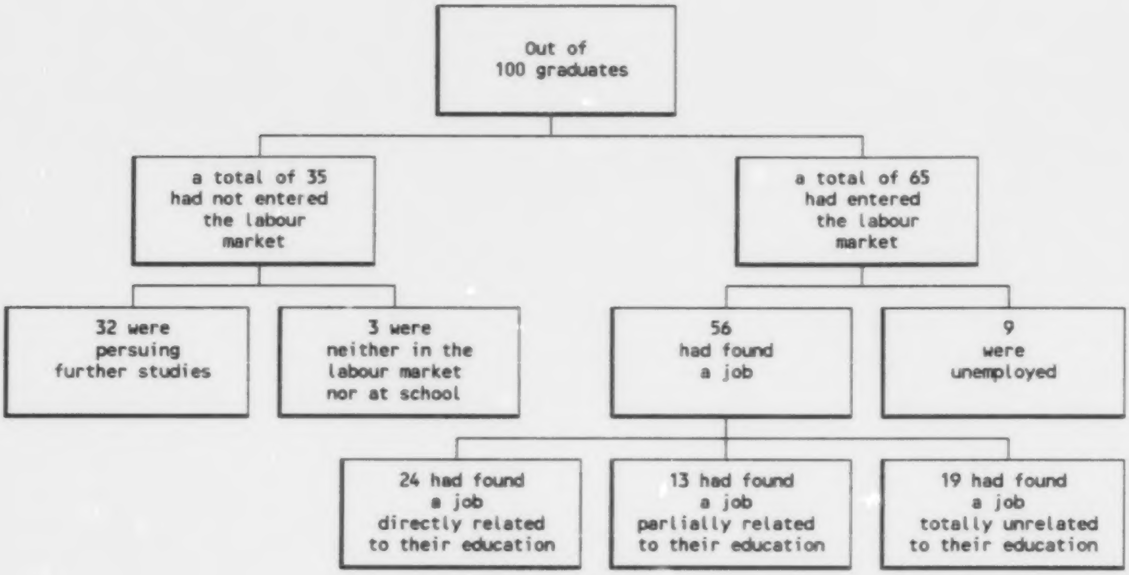
Over the coming years, the maintenance of institutional and industrial construction at a high level should provide better labour market access for graduates in this discipline than for others.

TECHNICAL DRAFTING

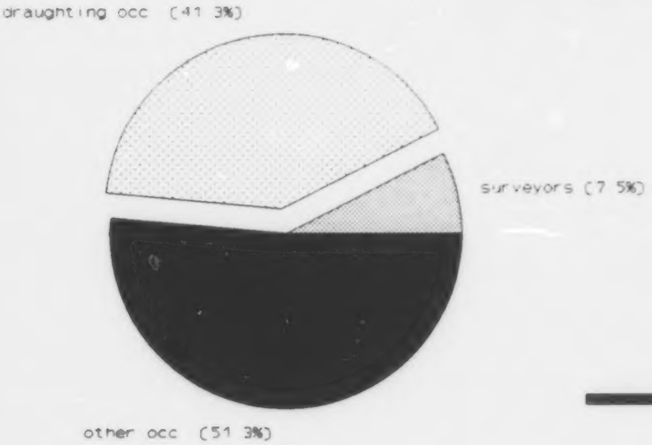
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 35 had not entered the labour market
a total of 65 had entered the labour market
32 were persuing further studies
3 were neither in the labour market nor at school
56 had found a job
9 were unemployed
24 had found a job directly related to their education
13 had found a job parlially related to their education
19 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	705	2.4	---
1985/90	270	2.3	---
1990/95	255	2.7	---
1995/2000	270	2.7	---

APPLIED SCIENCES

TECHNICAL DRAFTING
SECONDARY VOCATIONAL

This sector provides training in general drafting or in more specific types of drafting such as architectural, mechanical, and residential and commercial drafting; it also trains surveying operators.

Trends and projections

Consistent with the general trend, the number of graduates in this field fell from over 700 graduates in the early 1980s to some 270 in the 1985-1990 period. If it continues to maintain its share of graduates, this field of study should produce more or less the same number of graduates over the next decade in both good and bad years.

Occupation after graduation

A very high number of graduates, i.e. nearly one-third, decided to continue their studies, thus making the proportion of employed graduates seem very low at 56%. Also, nearly one-fifth of them found only temporary jobs. Finally, unemployed graduates represented about 14% of those in the labour force, a considerably lower proportion than the 20% for the graduates taken as a whole.

Occupational profile

About 40% of the graduates worked as draftsmen/women, 7% worked in surveying and related jobs and the same percentage worked as construction workers.

Salary

The average annual salary was $13,700, a salary level that is barely higher than that recorded for all employed graduates.

General picture

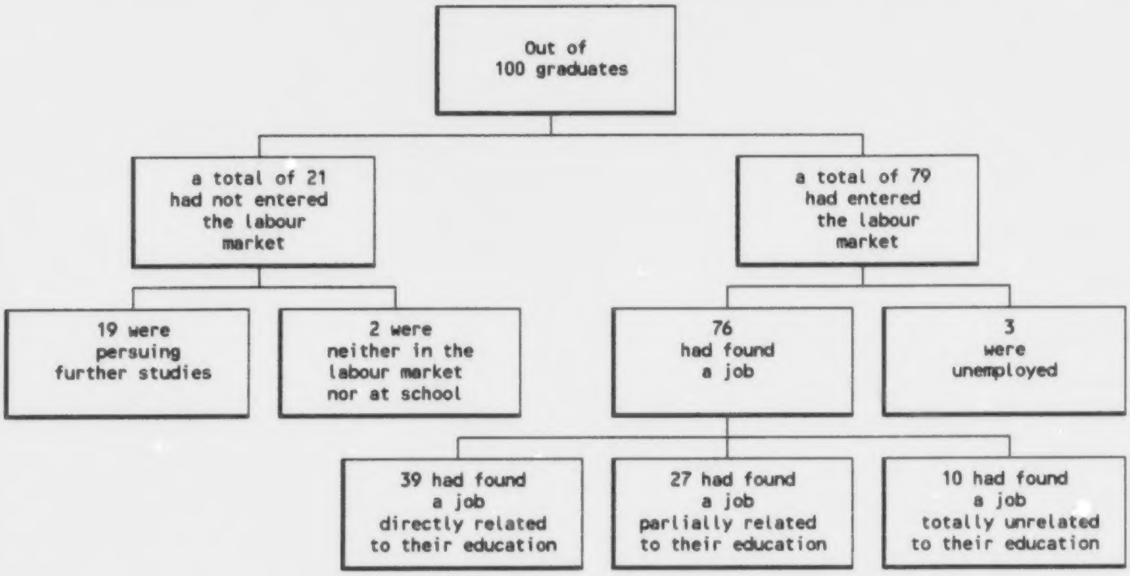
These graduates face a very difficult labour market in which both college and secondary graduates in technical drafting, architectural and building technologies and architectural drafting are all competing for jobs. This situation largely explains why a high number of secondary graduates decide to continue their studies. In recent years, new opportunities made possible by the computerization of both mechanical and architectural drafting have had a considerable impact on the employment rate of these professionals. In particular, it has become very difficult to enter the labour market without a knowledge of basic design software. Moreover, these new computer technologies greatly diminish the resources that are allocated to updating, correcting or modifying existing plans, thus reducing the human resources assigned to these tasks. At the same time, less-qualified draftsmen/women, tracers, are more vulnerable to technological change. However, draftsmen/women with more diversified technical skills in strength of materials, mechanics, architecture or related fields that allow them to do design drafting, are sought after and face a very favourable labour market.

ARCHITECTURAL DRAFTING TECHNOLOGY

APPLIED SCIENCES

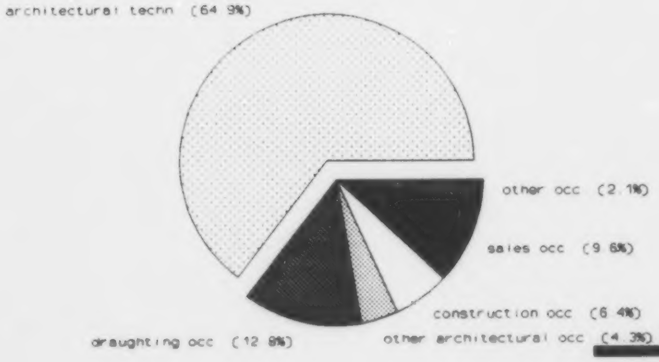
VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 21 had not entered the labour market
a total of 79 had entered the labour market
19 were persuing further studies
2 were neither in the labour market nor at school
76 had found a job
3 were unemployed
39 had found a job directly related to their education
27 had found a job parlially related to their education
10 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	225	1.5	0.2
1985/90	185	1.3	1.0
1990/95	165	1.3	0.8
1995/2000	170	1.3	0.7

ARCHITECTURAL DRAFTING TECHNOLOGY
VOCATIONAL COLLEGE DIPLOMA

Training in this field is offered in the Lower St. Lawrence, Laval- Laurentides-Lanaudière, Montreal, Mauricie-Bois-Francs and Saguenay-Lac St-Jean regions.

Trends and projections

The number of graduates in this discipline has been on the decline, dropping from an annual average of 230 to 180 between the first and the second half of the 1980s. Given the expected decrease in the school population, this downward trend should continue with an average of between 160 and 170 graduates annually over the next ten years.

Occupation after graduation

Despite the very low unemployment rate among these graduates, a slightly higher than average proportion decided to continue their studies after graduation. The 96% placement rate for these graduates was among one of the best at the college level. The very large majority of these jobs were at least partially related to education and more than 50% of graduates indicated that they held jobs directly related to their education. Temporary or part-time work was not very frequent.

Occupational profile

The largest number of graduates by far were working in the occupational group of architectural technicians (65% of jobs) one year after graduation. A large proportion of graduates indicated that they held jobs as designers (13%), while for 5% of them jobs as salespersons-technicians provided a means of entry into the labour market. Finally, occupations associated with site supervision accounted for 5% of employed graduates.

Salary

Despite better than average performance with respect to placement rate in related occupations, the salary earned by these graduates was slightly lower than average. The average annual salary for graduates who were working full time was $15,800 in 1988.

General picture

Employment follows the activity cycle in the construction sector. Thus, in the second half of the 1980s employment opportunities benefited from record levels of residential, institutional and industrial activity.

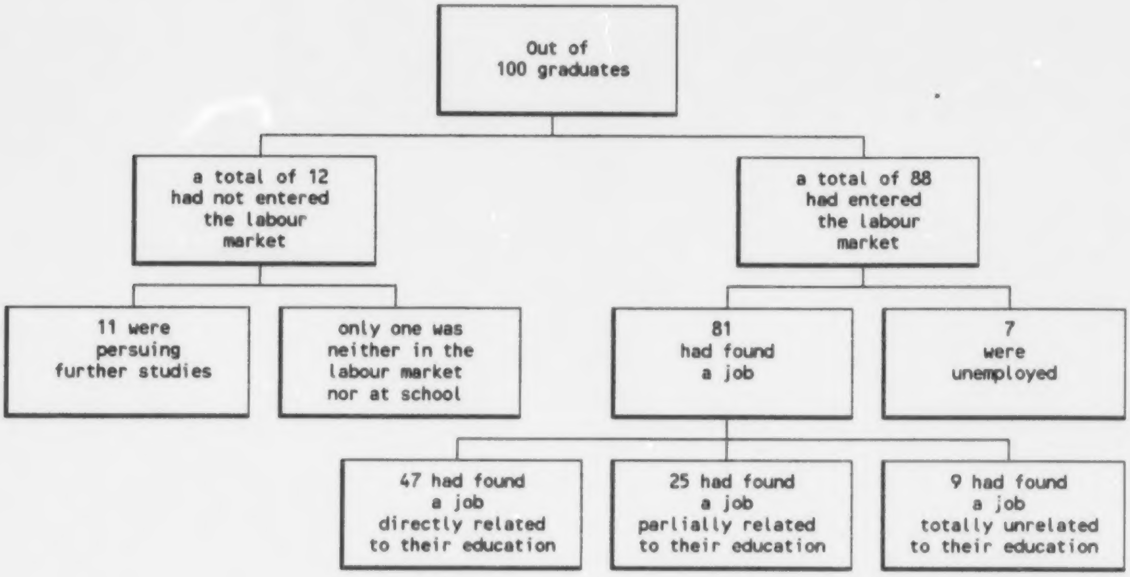
In the short and medium terms, construction activity will continue at its current level owing to the completion of major industrial projects and the start of the James Bay hydroelectric project. Over the second half of the 1990s, a considerable decrease in employment opportunities could be experienced while a cyclical decline in the construction sector could accompany the completion of these large projects.

OTHER ARCHITECTURE AND CONSTRUCTION TECHNOLOGIES

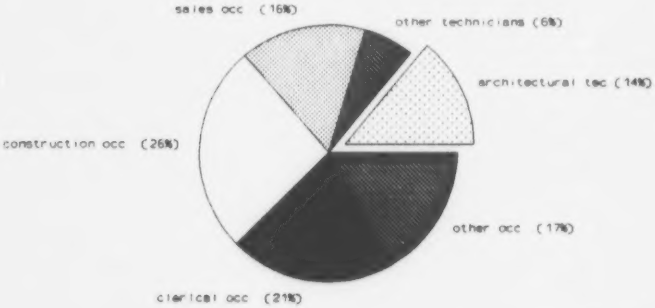
APPLIED SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 12 had not entered the labour market
a total of 88 had entered the labour market
11 were persuing further studies
only one was neither in the labour market nor at school
81 had found a job
7 were unemployed
47 had found a job directly related to their education
25 had found a job partially related to their education
9 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	205	1.4	0.3
1985/90	150	1.0	1.0
1990/95	120	1.0	0.8
1995/2000	125	1.0	0.5

OTHER ARCHITECTURE AND CONSTRUCTION TECHNOLOGIES

VOCATIONAL COLLEGE DIPLOMA

This field of training includes the technologies of building mechanical systems, realty appraisal, welding and naval architecture.

Trends and projections

After experiencing a higher than average increase in the number of graduates until 1986, this number has dropped by more than 20% since then. Given the dwindling school population at the college level, further decreases in the number of graduates are expected over the next decade.

Occupation after graduation

The data compiled on the basis of the 1988 Relance Survey indicate that these graduates face a favourable labour market. Unlike graduates in architectural drafting technologies, few of them chose to continue their studies, partly because of a placement rate of over 90%. Nearly 90% of employed graduates considered their duties partially related to their education and 60% considered this link direct. Moreover, most of the jobs were permanent and full time.

Occupational profile

Despite the fact that these graduates generally considered their jobs related to their education, they had a number of diverse jobs available to them upon graduation. Occupations in the construction sector constituted the main occupational category, with 25% of the jobs. Technicians, especially engineering and architecture technicians, accounted for slightly more than 20% of the jobs obtained. The occupations of salespersons-technicians and office workers constituted the other groups that provided the most openings to graduates upon completion of their studies.

Salary

The average salary of respondents to the survey who were working full time after graduation was $18,300 in 1988.

General picture

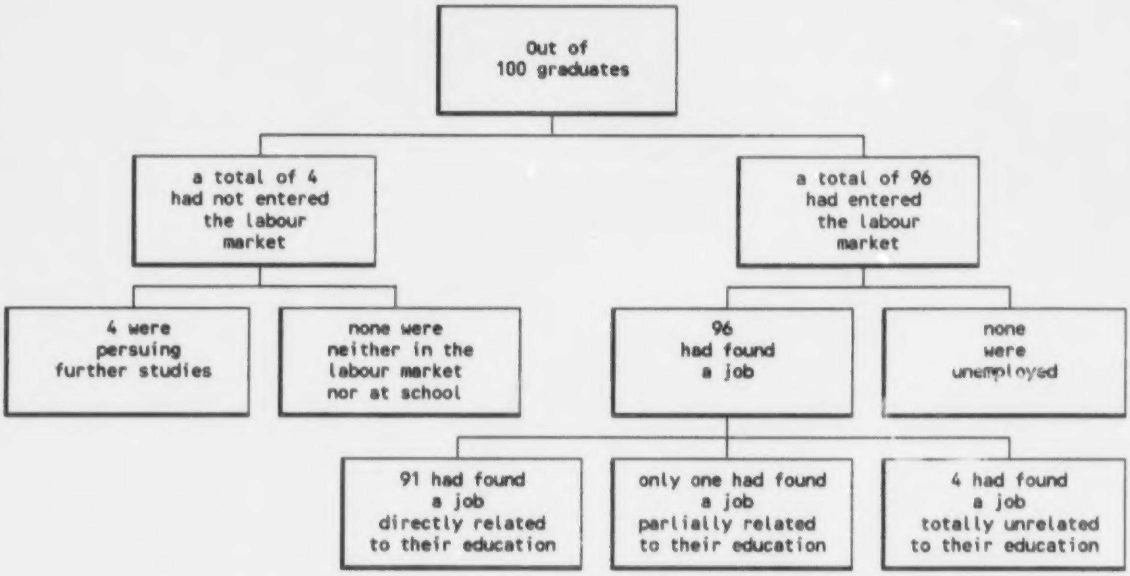
Closely linked to the growth of construction activity, the employment outlook for these graduates is subject to the cyclical fluctuations of this sector. Record activity levels in residential construction at the end of the 1981-82 recession gave rise to very favourable employment opportunities for these graduates. Over the next few years the economic decline in this sector will result in a contraction of the market for these graduates, particularly for those going into construction-related occupations.

ARCHITECTURE

BACHELOR'S DEGREE

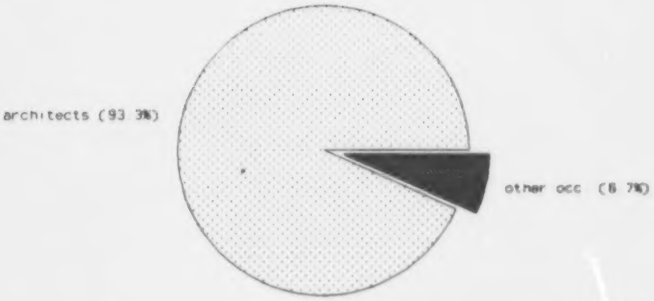
APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 4 had not entered the labour market
a total of 96 had entered the labour market
4 were persuing further studies
none were neither in the labour market nor at school
96 had found a job
none were unemployed
91 had found a job directly related to their education
only one had found a job partially related to their education
4 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	180	0.8	1.1
1985/90	185	0.7	1.0
1990/95	200	0.8	1.0
1995/2000	200	0.8	0.9

ARCHITECTURE
BACHELOR'S DEGREE

This field of study encompasses the different specialized disciplines related to architecture, except urban planning and landscape architecture. Programs in architecture are offered by Laval, McGill and Montréal. Mathematics courses are a prerequisite for all programs, while courses in psychology, biology, physics and chemistry may be prerequisites at some universities.

Trends and projections

The number of graduates has remained more or less steady throughout the 1980s, with an annual average of 180. During the coming decade, if the present proportion is maintained, there will be an average of 200 graduates a year.

Occupation after graduation

These graduates showed the highest labour market participation rate of any group of graduates with bachelor's degrees. Less than 5% of them decided not to join the work force in order to pursue further studies. Two years after graduation, all those who had entered the labour market were employed, and the vast majority were working in occupations directly related to their education.

Occupational profile

More than 90% of these graduates were working as architects.

Salary

Respondents to the 1988 survey who were working full time two years after graduation reported an average annual salary of $25,300. This salary level was quite comparable to that of respondents with bachelor's degrees taken as a whole.

General picture

Graduates in this discipline were among the most advantaged of graduates with first degrees in terms of both labour market entry and salary. It is not surprising to note that proportionately more of these respondents were satisfied with their choice of training than the average graduate with a bachelor's degree.

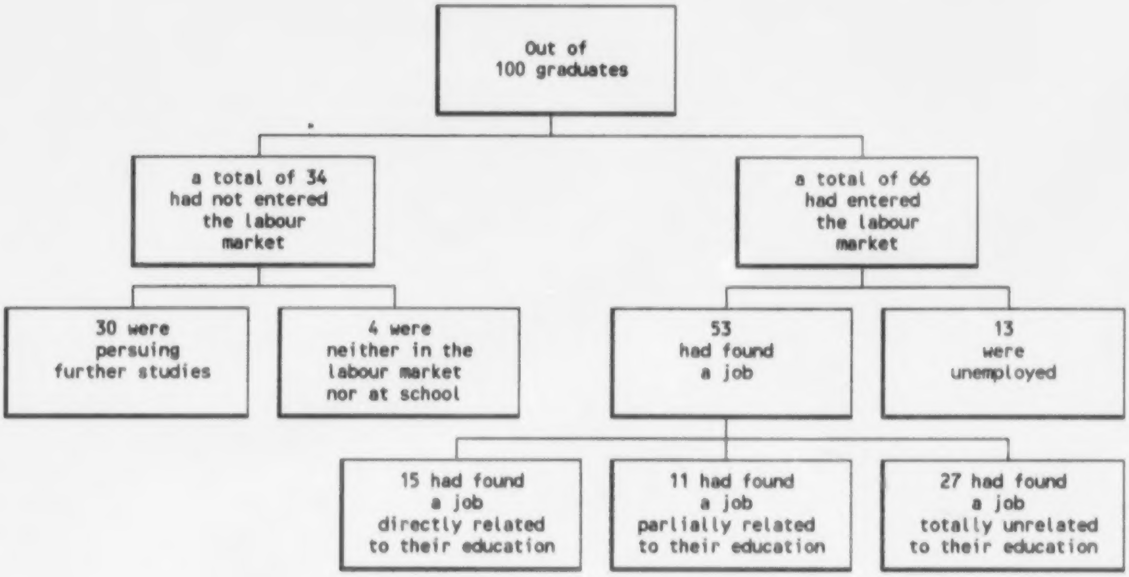
The first half of the 1990s should compare quite favourably to the period just past in terms of labour market entry opportunities. As for the second half, job openings could drop slightly, but should still remain above average for graduates with bachelor's degrees.

OFFICE EQUIPMENT ELECTRONICS

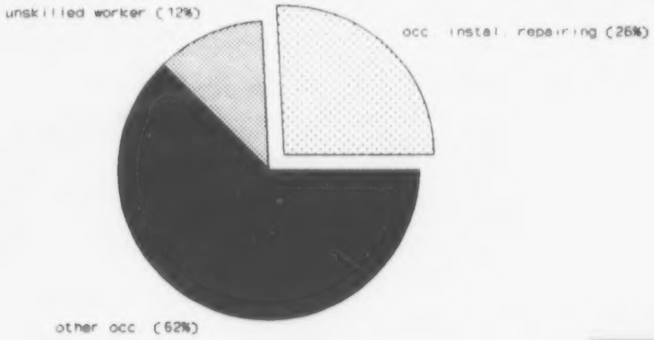
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 34 had not entered the labour market
a total of 66 had entered the labour market
30 were persuing further studies
4 were neither in the labour market nor at school
53 had found a job
13 were unemployed
15 had found a job directly related to their education
11 had found a job parlially related to their education
27 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	2280	7.7	0.2
1985/90	625	5.4	1.0
1990/95	475	5.0	1.2
1995/2000	495	5.0	1.2

APPLIED SCIENCES

OFFICE EQUIPMENT ELECTRONICS
SECONDARY VOCATIONAL

This field of study comprises a large number of disciplines, including the specialties of servicing and electromechanics of electronic and office equipment as well as the operation, installation and repair of telecommunications equipment.

Trends and projections

Like the field of electricity, office equipment electronics has lost most of its popularity over the years. While more than 2,200 students graduated during the 1980-1985 period, only about 625 graduated in the second half of the decade. The number of graduates may well continue to decline during the 1990s. Until now, these disciplines have attracted mostly male students.

Occupation after graduation

Recent labour market data largely explain this decline. Barely more then 50% of graduates were able to find a job in the year after graduation, and more than half of them held jobs that were totally unrelated to their specialty. In these circumstances, it is not surprising to note that nearly one out of three graduates preferred to continue his or her studies. This could explain why the 20.7% unemployment rate is not higher for this field of study than for the entire secondary vocational sector.

Occupational profile

Graduates held a number of very diverse occupations. This can be explained both by the variety of study programs and the high number of graduates who held jobs that were unrelated to their specialty. Among the most closely related occupations are installer of electronic equipment, servicer of radios and televisions and worker in the electrical and electronic products sector, which accounted for nearly one-third of employed graduates. Note that nearly one-half of all workers were employed in the retail trade.

Salary

The average salary of electronics graduates is not very high. It is only $11,700 compared to an average of $13,600. The difficulties faced by these graduates on the labour market and particularly the fact that a large number of them held jobs that were unrelated to their training no doubt greatly explain this gap.

General picture

Graduates in this field of training at the secondary level are primarily oriented towards the more traditional areas of electronics, i.e. the repair of home electrical appliances and office equipment. In recent years, a large number of young people have been trained in these fields, thus glutting the market somewhat. Moreover, graduates of electrical technology at the college level who are not inclined towards concept-oriented tasks have also entered these employment sectors in large numbers, adding to the already strong competition.

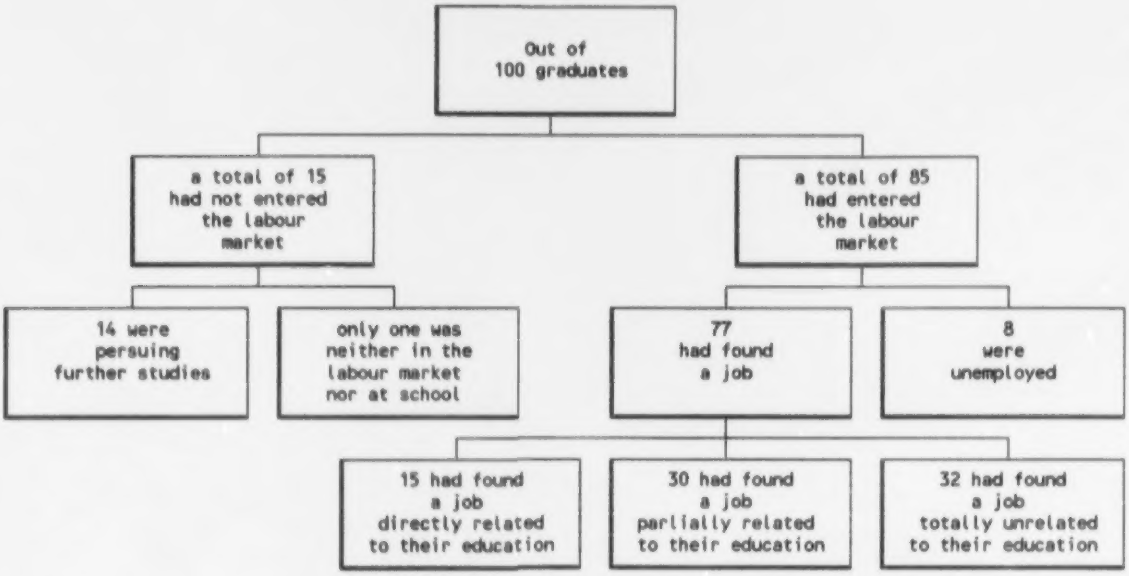
Candidates who wish to improve their employment opportunities over the next few years should increasingly acquire more specialized knowledge in electronics applications in the area of production equipment rather than small appliances. The others can expect to see the level of competition remain very high.

ELECTROMECHANICS OF AUTOMATED SYSTEMS

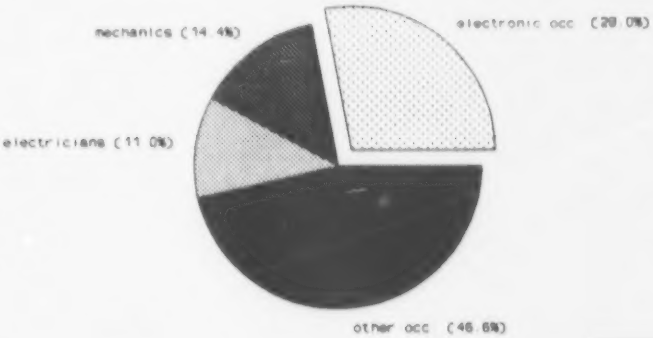
APPLIED SCIENCES

SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 15 had not entered the labour market
a total of 85 had entered the labour market
14 were persuing further studies
only one was neither in the labour market nor at school
77 had found a job
8 were unemployed
15 had found a job directly related to their education
30 had found a job partially related to their education
32 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	145	0.5	1.6
1985/90	425	3.7	1.0
1990/95	365	3.9	1.0
1995/2000	380	3.9	1.1

ELECTROMECHANICS OF AUTOMATED SYSTEMS
SECONDARY VOCATIONAL

This field of study provides training in electromechanics of automated systems. It enables students to acquire the skills needed to maintain and ensure the operation of automated production equipment.

Trends and projections

Unlike the field of office equipment electronics, electronics of automated systems has attracted a greater number of students ever since it was established in 1984, thus going against the continuous downtrend in enrolment in secondary vocational programs. Over the 1990s, the number of graduates should approach some 350 to 400 annually.

Occupation after graduation

More than three-quarters of the graduates found jobs which were full time and permanent for the most part. The unemployment rate in this group was twice as low as that of graduates taken as a whole. However, these positive statistics are overshadowed by the high number of graduates, nearly two-fifths, who held jobs unrelated to their qualifications. This may have prompted a sizable proportion of graduates to continue their studies further.

Occupational profile

Of the very wide range of occupations practised by these graduates, nearly one-quarter of the jobs were in the area of electronic equipment installation; another group, accounting for slightly more than 10% of employed graduates, were working as electricians.

Salary

The average annual salary in 1988 was about $16,600, a salary level more than $3,000 higher than the average salary of graduates taken as a whole.

General picture

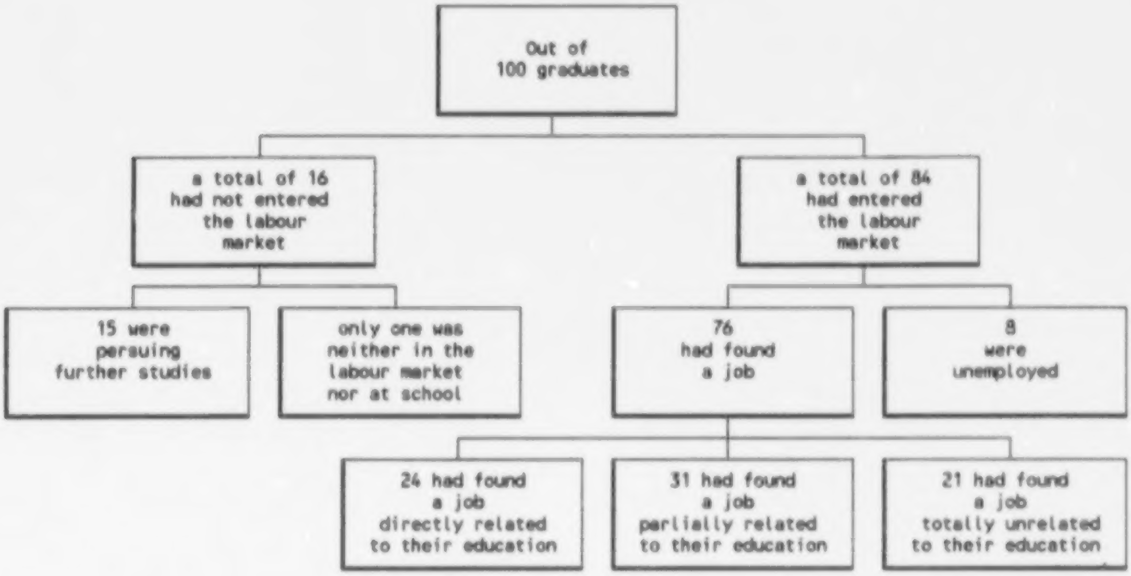
Unlike their colleagues specializing in the repair of household appliances and office equipment, the employment outlook in related occupations for these graduates compares favourably to the average for the secondary vocational sector. Given the increasingly larger investments made by manufacturing companies in automated production equipment and the relatively new skills sought for the maintenance, repair and operation of this equipment, demand for these graduates should grow considerably over the next few years. Employment opportunities in this field are expected to grow even more and surpass the average of other disciplines at this level of training.

ENGINEERING TECHNOLOGY ELECTRICAL AND ELECTRONIC

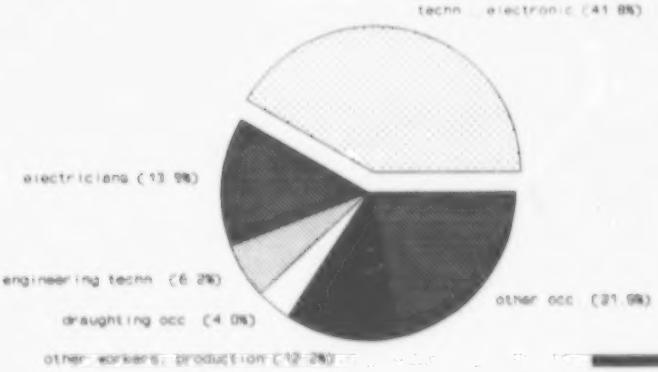
APPLIED SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 16 had not entered the labour market
a total of 84 had entered the labour market
15 were persuing further studies
only one was neither in the labour market nor at school
76 had found a job
8 were unemployed
24 had found a job directly related to their education
31 had found a job partially related to their education
21 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	1145	7.7	0.7
1985/90	1323	9.3	1.0
1990/95	1125	8.9	0.9
1995/2000	1170	8.9	0.9

APPLIED SCIENCES

ENGINEERING TECHNOLOGY ELECTRICAL AND ELECTRONIC

VOCATIONAL COLLEGE DIPLOMA

Programs of study in electrical and electronic engineering technologies are available in all Quebec regions. Specialized avionics and audio-visual equipment technologies are also given in a limited number of college institutions in the greater Montreal and Quebec City areas.

Trends and projections

Offered in most college institutions, these technologies are also among the most popular since they encompass nearly 10% of vocational college graduates. This popularity was on an upward trend until approximately the mid-1980s when they started to stabilize. If this trend continues over the 1990s, an average of 1,150 students will graduate each year.

Occupation after graduation

About 15% of these graduates were continuing their studies one year after completing their degrees. Of the other graduates, 90% had found a job, representing a proportion comparable to vocational college graduates taken as a whole. According to the graduates, however, these jobs were less directly related to education than in other disciplines. The relation was nonetheless significant since nearly three out four graduates considered their duties at least partially related to their education.

Occupational profile

The occupational profile of the entry level jobs clearly showed that these graduates were finding jobs that were more directly related to the installation and repair of electronic equipment than design. In fact, installation jobs accounted for 42% and repair jobs for barely 11% of these positions. Maintenance electricians' jobs also provided employment opportunities that have to be considered. Unlike most college disciplines, the categories of office work and sales figured little in the occupational profile of these graduates.

Salary

The annual salary of $20,700 earned by respondents to the survey who were working full time was higher than the average income of the vocational college graduates taken as a whole.

General picture

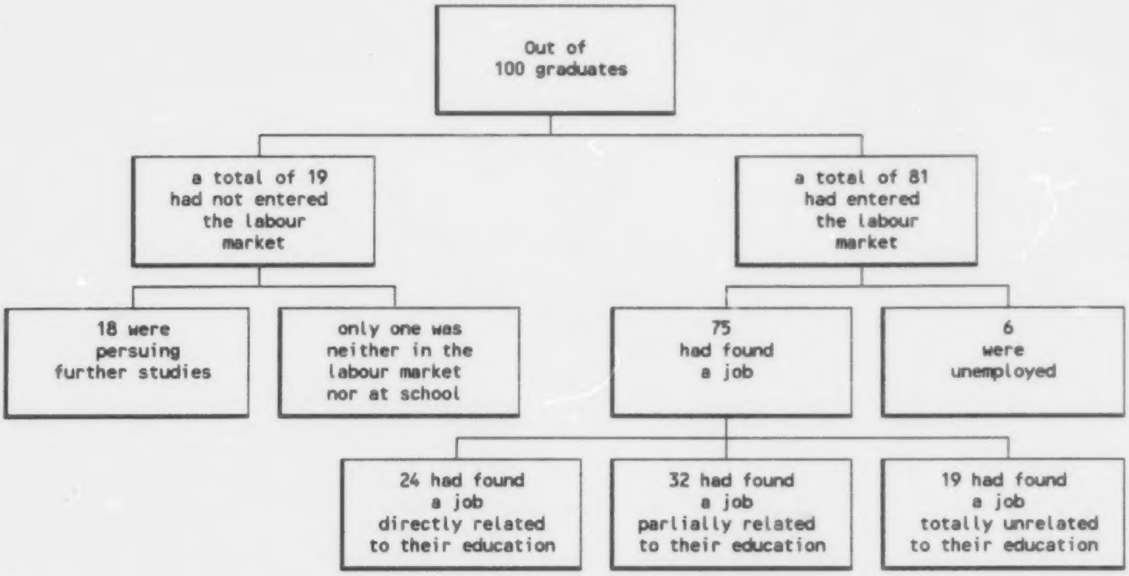
The technological changes which have been characterized by electronics applications to office equipment has given rise to appreciable growth in the demand for electronics technicians to install and repair this equipment. Although the demand will continue to be significant over the next few years, the labour force that is presently available and the graduates who will continue to enter the labour market will likely create a surplus of workers with skills that are already more traditional. In other respects, shortages of qualified labour in the sector of electronics applied to production equipment are now foreseeable and a large requirement growth is expected in this area.

INSTRUMENTATION

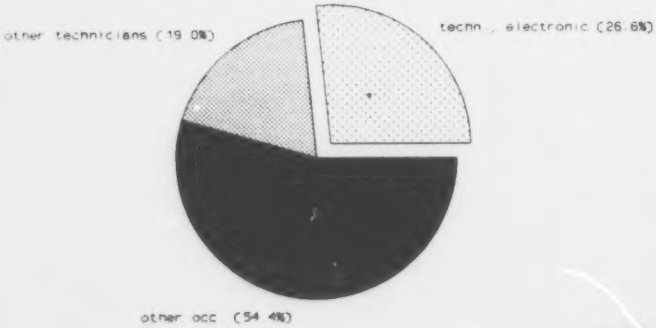
APPLIED SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 19 had not entered the labour market
a total of 81 had entered the labour market
18 were persuing further studies
only one was neither in the labour market nor at school
75 had found a job
6 were unemployed
24 had found a job directly related to their education
32 had found a job parlially related to their education
19 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	205	1.4	0.5
1985/90	175	1.2	1.0
1990/95	145	1.2	1.1
1995/2000	155	1.2	1.1

APPLIED SCIENCES

INSTRUMENTATION
VOCATIONAL COLLEGE DIPLOMA

A specialty of electrotechnology, this discipline is offered in six of the twelve Quebec regions, namely the Lower St. Lawrence, Estrie, Mauricie-Bois-Francs, Montreal, Quebec City and Saguenay- Lac St-Jean regions.

Trends and projections

The growth in the number of graduates in this discipline closely reflected that of the vocational college sector taken as a whole. If this trend continues, an average of 140 to 150 students are expected to graduate in this discipline each year over the next decade.

Occupation after graduation

According to the 1988 Relance Survey, a proportion of graduates comparable to the average entered the labour force. The placement rate for these graduates was 93% one year after graduation, leaving only 7% unemployed. The jobs, however, were less often and less directly related to education than the average.

Occupational profile

The weakest relation between education and work translated into a very diversified occupational profile. As with all other applied sciences technologies at the college level, the largest proportion of graduates held jobs related to manufacturing. Of these, the occupational group of installers and repairers of electronic and precision equipment was the largest, with 30% of the jobs. The groups of engineering technicians and designers, which accounted for 18% of the jobs, also provided these graduates with interesting employment opportunities. However, the fairly large number of less specialized clerks and salespersons, which accounted for 25% of the jobs, points to the difficulty experienced by some graduates on the labour market.

Salary

The average annual income of graduates who were working full time one year after completing their studies was $19,200 in 1988.

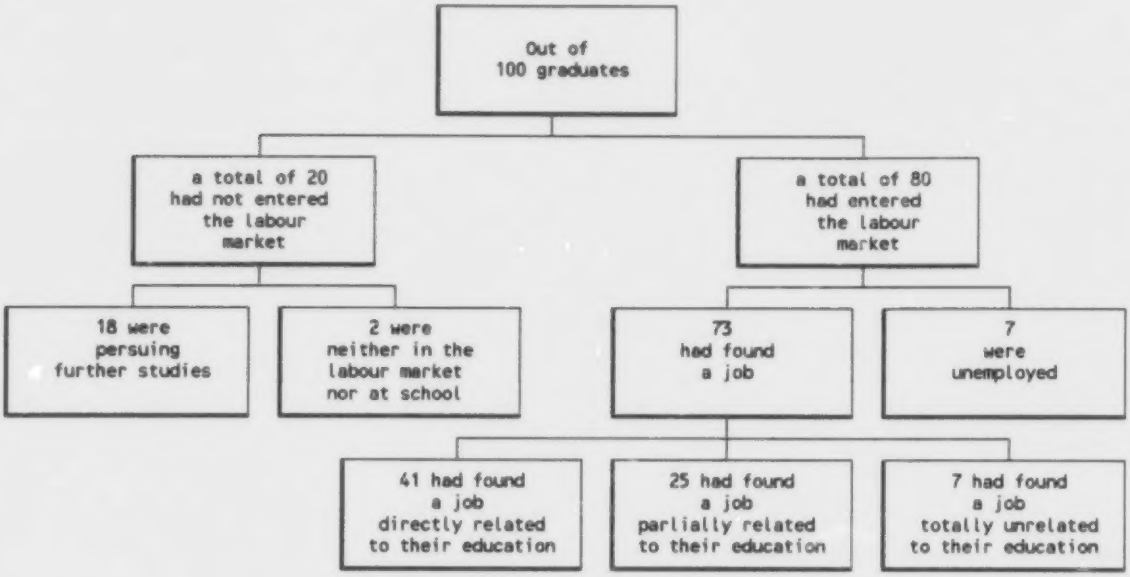
General picture

Graduates in this field of training will probably be in the best position to seize opportunities that will increasingly arise in fields related to the installation, maintenance and operation of production equipment using electronic technologies. The requirement growth which accelerated in the second half of the 1980s should stay at the same level and improve the employment outlook even more for these graduates.

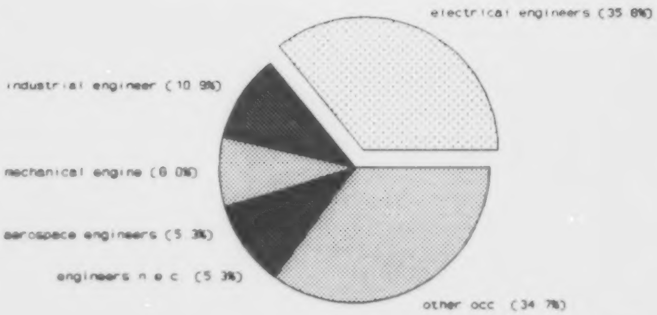
ELECTRICAL ENGINEERING
BACHELOR'S DEGREE

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 20 had not entered the labour market
a total of 80 had entered the labour market
18 were persuing further studies
2 were neither in the labour market nor at school
73 had found a job
7 were unemployed
41 had found a job directly related to their education
25 had found a job parlially related to their education
7 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	505	2.3	1.1
1985/90	740	3.0	1.0
1990/95	775	3.0	0.7
1995/2000	800	3.1	0.8

ELECTRICAL ENGINEERING
BACHELOR'S DEGREE

This field of study encompasses specialties in electricity and electronics. Programs are offered at Concordia, Laval, Polytechnique and Sherbrooke. The prerequisites are mathematics, physics, chemistry and biology, in addition to a Diploma of Collegial Studies or equivalent.

Trends and projections

The popularity of this discipline has grown in comparison with other engineering disciplines. The number of graduates in electrical engineering in relation to other engineering specialties rose from 25% to 30% between the early and late 1980s. During the 1990s, the proportion should be about 30%, or an average of 775 to 800 graduates annually.

Occupation after graduation

According to the 1988 survey of graduates, the labour market participation rate of these graduates was 80%. More than 90% of those who had decided to enter the labour market had found jobs. Of those who were working, a high percentage (90%) had jobs at least partially related to their education.

Occupational profile

Two years after graduation, a high proportion of graduates were working in the engineering field (65%). The electrical engineers group accounted for 35% of jobs. Proportionately fewer of these graduates than graduates in engineering taken as a whole held management jobs.

Salary

As for engineering graduates taken as a whole, the average salary of graduates employed two years after graduation was higher on average than that of graduates with bachelor's degrees taken together. The average salary was $29,100 annually.

General picture

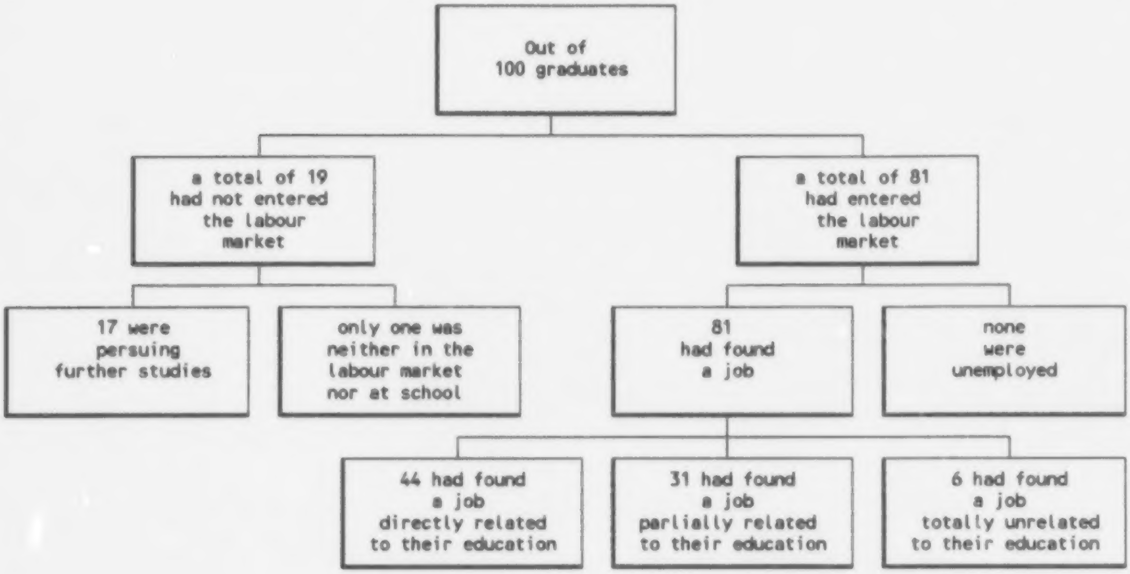
The above information points to a more favourable labour market on average for these graduates. Compared with other engineering disciplines, the situation seems to be average.

The rise in the number of graduates during the 1980s was accompanied by an increase in requirements, and this meant that the market remained relatively steady. The market situation in the 1990s may be somewhat different, as requirement growth is expected to slow down. Thus graduates in this discipline in the next few years may be faced with a somewhat tighter market than at present. All the same, prospects will still be better than average.

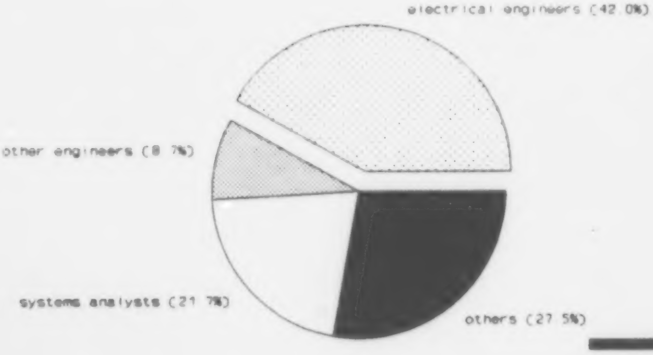
ELECTRICAL ENGINEERING APPLIED SCIENCES

MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 19 had not entered the labour market
a total of 81 had entered the labour market
17 were persuing further studies
only one was neither in the labour market nor at school
81 had found a job
none were unemployed
44 had found a job directly related to their education
31 had found a job parlially related to their education
6 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	90	2.2	1.0
1985/90	125	2.5	1.0
1990/95	110	2.3	1.0
1995/2000	110	2.3	1.0

ELECTRICAL ENGINEERING
MASTER'S DEGREE AND DOCTORATE

Graduate programs are offered at Concordia, Laval, McGill, Montréal (Polytechnique) and Sherbrooke universities.

Trends and projections

As in the case of civil engineering, the number of graduates with master's degrees or doctorates in electrical engineering grew more quickly than the number of graduates in other engineering disciplines. During the past decade, the number of degrees granted annually doubled from 60 to 120. If the present proportion is maintained, the number of graduates during the 1990s should be about 110 annually.

Graduates' labour market participation

Two years after graduation, the vast majority of those who had decided to enter the labour market had found jobs, most at least partly related to their education. Proportionately, about the same number of graduates in this discipline chose to continue their education as the number of graduates taken as a whole did. Generally, however, the rate was 25% lower than among graduates in other engineering disciplines.

Occupational profile

Half of the graduates who were employed two years after graduation were working in engineering jobs, more than two thirds as electrical engineers. The group of system analysts also provided a significant number of opportunities, accounting for 20% of jobs found. The third most important group, with 14% of jobs, was the management category. Contrary to the case of other engineering groups, less than 10% of these graduates were hired by the professional and technical services industry. The communications industries (transmission and equipment manufacturing) was the principal sector providing employment; more than 46% of employed graduates worked in this sector.

Salary

The average annual salary of $43,500 reported by respondents to the 1988 survey was markedly higher than that of respondents in other disciplines.

General picture

The labour market conditions facing these graduates were comparable with those facing graduates with advanced degrees in other fields. Prospects have remained more or less the same over the past number of years, as increased demand followed the curve of graduates. An above average percentage said they were satisfied with their education.

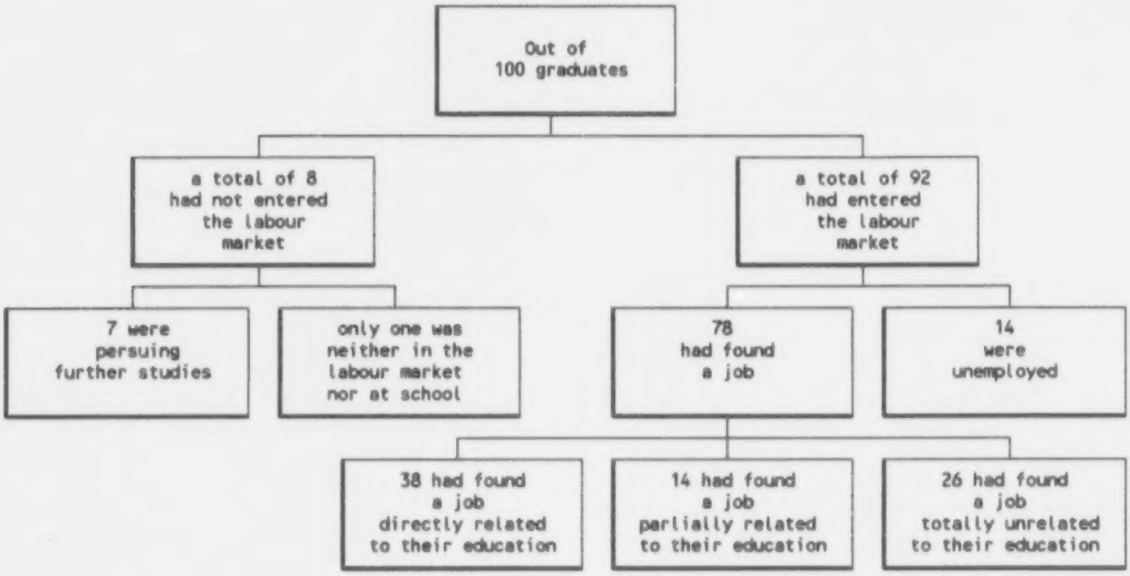
During the 1990s, labour market entry prospects for related jobs will continue to be affected positively by the dynamism of the telecommunications and communications equipment manufacturing industries. The use of automated production equipment in manufacturing should also help to create jobs for these graduates.

HEAVY EQUIPMENT

SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation



Out of 100 graduates

a total of 8 had not entered the labour market

a total of 92 had entered the labour market

7 were persuing further studies

only one was neither in the labour market nor at school

78 had found a job

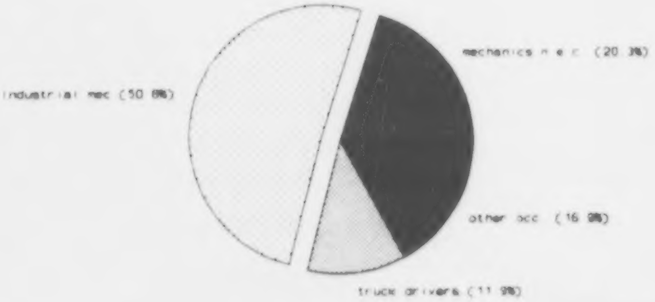
14 were unemployed

38 had found a job directly related to their education

14 had found a job partially related to their education

26 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	910	3.1	---
1985/90	290	2.5	1.0
1990/95	190	2.0	0.7
1995/2000	200	2.0	0.3

APPLIED SCIENCES

HEAVY EQUIPMENT
SECONDARY VOCATIONAL

This discipline trains heavy equipment mechanics.

Trends and projections

The popularity of this training program has declined and the number of annual graduates has dropped by more than two-thirds over the past decade.

Occupation after graduation

More than 90% of the graduates in this discipline entered the labour market immediately after graduation. The unemployment rate for these graduates was 15% compared to an average of 20% for secondary vocational graduates. The jobs obtained were, for the most part, at least partially related to education and, for more than 75% of graduates, full time and permanent.

Occupational profile

More than 70% of those who found a job were working as mechanics. The category of industrial machinery mechanics which comprises farm, forestry and construction machinery mechanics as well as diesel mechanics constituted the largest group, accounting for more than 50% of the jobs. With 10% of the jobs, the automobile mechanics groups also provided an appreciable number of first jobs. In addition to the mechanics groups, graduates in this field of training held jobs primarily as truck drivers and unskilled workers.

Salary

At $18,000, the average annual salary reported by graduates in this discipline who were working full time one year after graduation was one of the highest salary levels in the secondary vocational sector.

General picture

Compared to automobile or diesel mechanics, graduates in this discipline appeared to enjoy a more favourable labour market in terms of employment opportunities and salary. These professionals benefited from both the greater mechanization of agricultural, forestry and mining operations and the expansion of the transportation sector. Although they partly share the same labour market as college graduates in mechanical engineering technology, these graduates are able to compete effectively even if they do have limited access to jobs in the manufacturing sector.

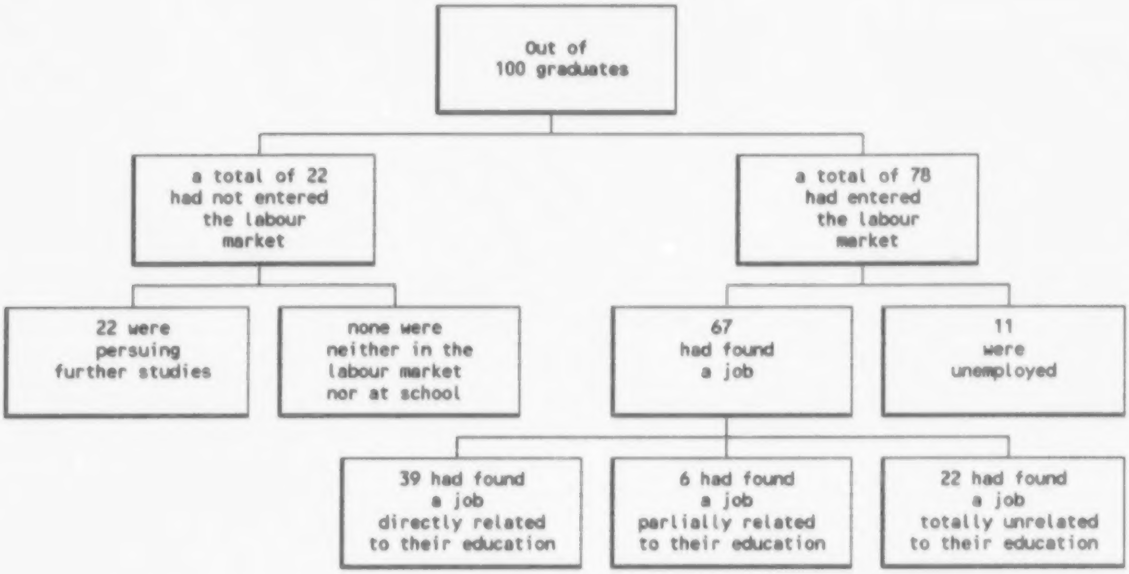
The high level of activity in industrial construction expected in the first half of the 1990s and the continuing mechanization of the agricultural, forestry and mining sectors should help to maintain above-average job opportunities for these graduates.

FARM MACHINERY MECHANICS

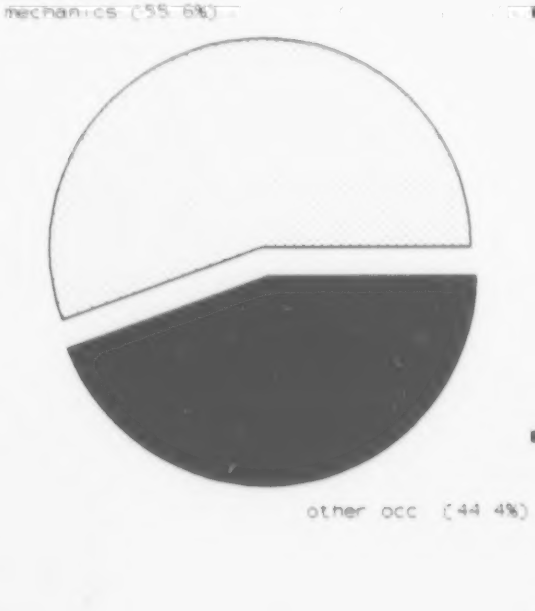
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 22 had not entered the labour market
a total of 78 had entered the labour market
22 were persuing further studies
none were neither in the labour market nor at school
67 had found a job
11 were unemployed
39 had found a job directly related to their education
6 had found a job partially related to their education
22 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	40	0.1	---
1985/90	25	0.2	1.0
1990/95	15	0.1	1.1
1995/2000	15	0.1	0.9

FARM MACHINERY MECHANICS

SECONDARY VOCATIONAL

This field of study includes training programs dealing specifically with the maintenance and repair of farm machinery.

Trends and projections

Given the limited number of available programs and the few occupations that are open to these students, farm machinery mechanics is among the programs that trains the least number of secondary vocational graduates. If the recent trend continues, it is estimated that the annual number of graduates will remain at about 15 over the 1990s.

Occupation after graduation

Of the 18 graduates who participated in the 1988 survey, 12 were employed. Two-thirds of them were working in jobs that were directly or partially related to their specialty and all of them were working full time. Of the others, only two were unemployed, representing a lower unemployment rate than that of secondary vocational graduates taken as a whole.

Occupational profile

One-third of the employed graduates were working as mechanics and repairers of industrial or farm machinery. The occupational profile of these graduates also included dairy farm workers and print shop workers.

Salary

The hourly wage for occupations most frequently related to this study program varied between $6 and $17 in 1988.

General picture

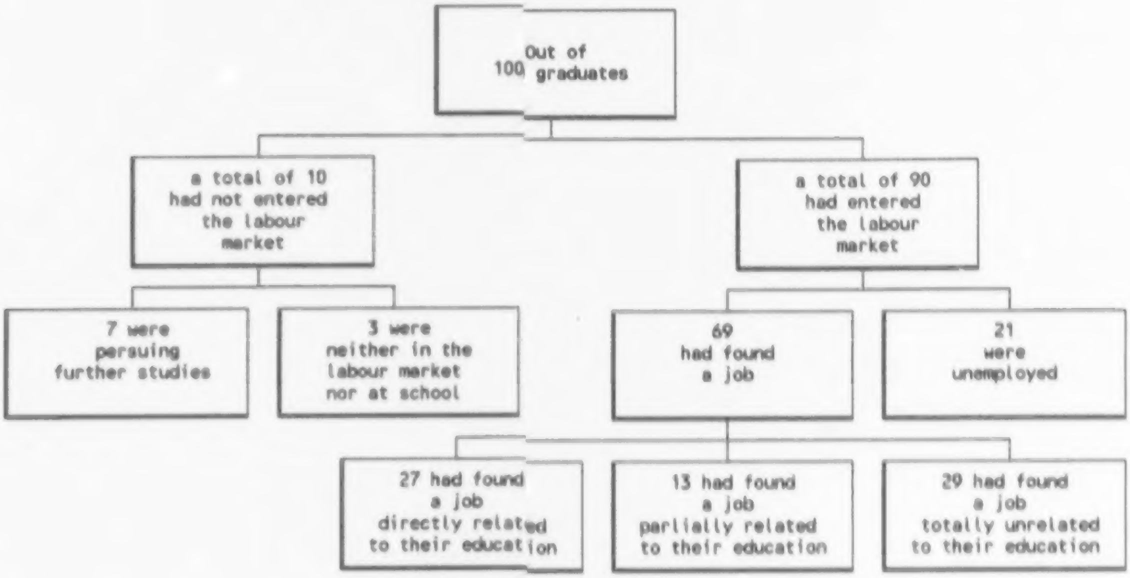
The advanced mechanization of agricultural operations which followed the expansion of farms has boosted demand for workers involved in equipment maintenance and repair. While the requirement for industrial machinery mechanics appears to have been adversely affected by the growing complexity of equipment to the benefit of electronics and robotics specialists, the job prospects for workers in farm machinery and forestry mechanics have increased. Given the recent trend, the employment outlook for the next decade should remain excellent.

AUTOMOBILE MECHANICS

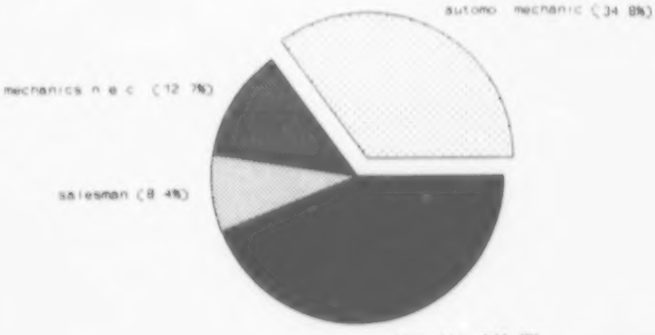
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 10 had not entered the labour market
a total of 90 had entered the labour market
7 were persuing further studies
3 were neither in the labour market nor at school
69 had found a job
21 were unemployed
27 had found a job directly related to their education
13 had found a job partially related to their education
29 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	3110	10.5	---
1985/90	1145	9.9	---
1990/95	735	7.8	---
1995/2000	770	7.8	---

AUTOMOBILE MECHANICS
SECONDARY VOCATIONAL

This field of study comprises automobile mechanics, including light and recreational vehicles.

Trends and projections

This vast field of study, which has a very strong concentration of male students, produced some 1,150 graduates annually during the 1985-90 period, thus accounting for nearly 10% of all secondary vocational graduates. Student interest in these disciplines was even more pronounced in the first half of the 1980s when more than 3,100 students graduated each year.

Occupation after graduation

Seven out of ten of the 1987 graduates were employed one year after graduation, a proportion slightly above the average, and 23.7% of the graduates were unemployed. Although the graduates' employment rate was relatively high, more than two-fifths of them were working in jobs that were unrelated to their occupational skills.

Occupational profile

More than 37% of the employed graduates were working as automobile mechanics. Of the other occupational groups related to the graduates' training, industrial machinery mechanics accounted for about 8% of the jobs. Because of the large number of graduates and the very strong percentage of those who hold jobs that are unrelated to their specialty, the employed graduates are working in a large number of occupations and in more than 40 economic sectors. The retail trade sector is predominant, however, accounting for half the jobs.

Salary

Those who succeeded in finding a job earned an average annual salary of $14,000 in 1988 compared to the $13,600 average salary for all the employed 1987 graduates in the secondary vocational sector.

General picture

Over the past decade, the automobile sector has undergone very rapid growth which has drastically affected both the technical skills of workers and the work milieu itself. Among other things, we have seen the almost complete disappearance of neighbourhood mechanics' shops which constituted potential employers for many graduates. The greater complexity of mechanical parts, the increasing use of electronic parts, and the extension of warranties are all factors that have contributed to the concentration of repair and maintenance at dealerships as well as the appearance of specialized shops. The concentration of activities and more sophisticated diagnostic techniques have resulted in a much slower growth rate for mechanics' jobs than the growth of the automobile sector in general.

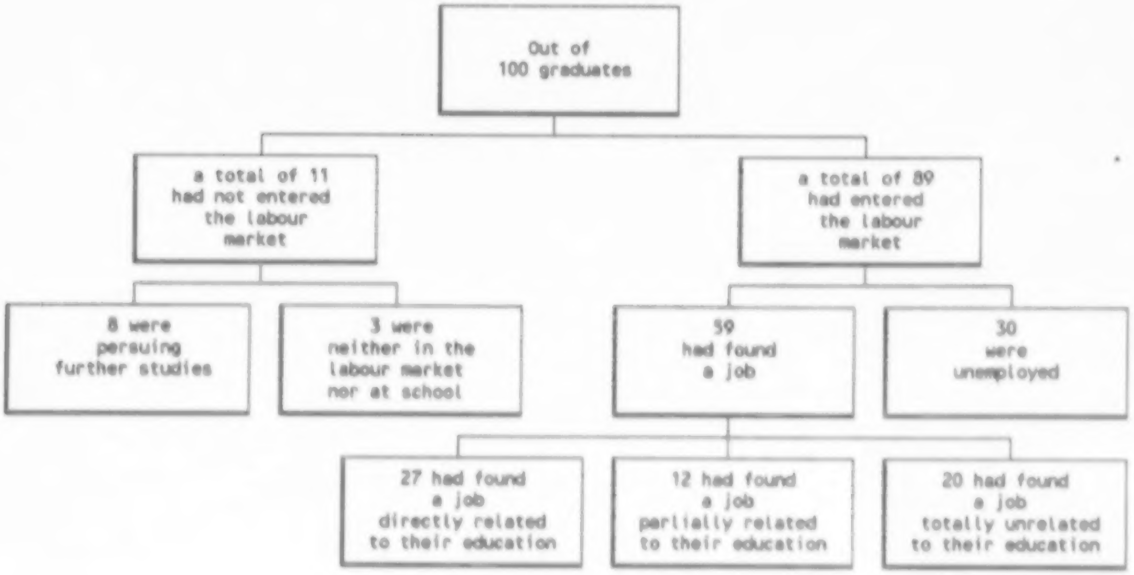
All of these factors should continue to exert an influence over the next few years and will again limit the growth in the demand for these graduates. Nonetheless, the automobile trades will remain numerous and will continue to provide employment opportunities for a large number of mechanics.

AUTOBODY WORK

SECONDARY VOCATIONAL

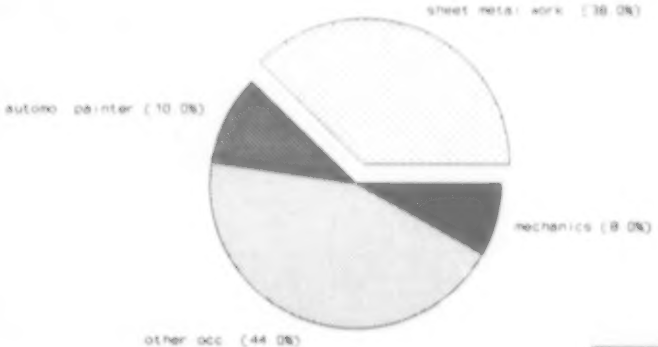
APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 11 had not entered the labour market
a total of 89 had entered the labour market
8 were persuing further studies
3 were neither in the labour market nor at school
59 had found a job
30 were unemployed
27 had found a job directly related to their education
12 had found a job partially related to their education
20 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	540	1.8	...
1985/90	140	1.2	1.0
1990/95	90	0.9	0.7
1995/2000	90	0.9	0.5

AUTOBODY WORK
SECONDARY VOCATIONAL

This field of study trains students to do autobody work, repairs and repainting.

Trends and projections

About 140 students received a diploma each year during the 1985-90 period, i.e. a drop of more than 75% in relation to an average of more than 540 graduates enrolled in the program during the five previous years. If the autobody work sector continues to produce its recent share of about 1% of all secondary vocational graduates, some 90 students may be expected to graduates each year over the 1990s.

Occupation after graduation

The loss of student interest in this field of study may be explained by the high levels of unemployment shown by recent data. In fact, about one-third of the 1987 graduates were unemployed one year after graduation. Moreover, of the approximately 60% who were employed, more than one-third were working in jobs that were unrelated to their training.

Occupational profile

One of the most related occupations is that of sheet-metal worker, which accounts for nearly 40% of all 1987 graduates. Nearly half of all of these graduates work in the retail sector.

Salary

The average salary earned in 1988 was $13,300, i.e. a salary level just below the average salary reported by all the secondary vocational graduates.

General picture

Although fairly stable within painting workshops, the demand for automobile painters was adversely affected in recent years by the automation of painting tasks in automobile manufacturing plants. From the standpoint of autobody work, the high cost of equipment and the greater sophistication of automobiles have had the effect of concentrating car repairs at car dealerships as in the case of automobile mechanics, thus reducing employment opportunities in independent garages.

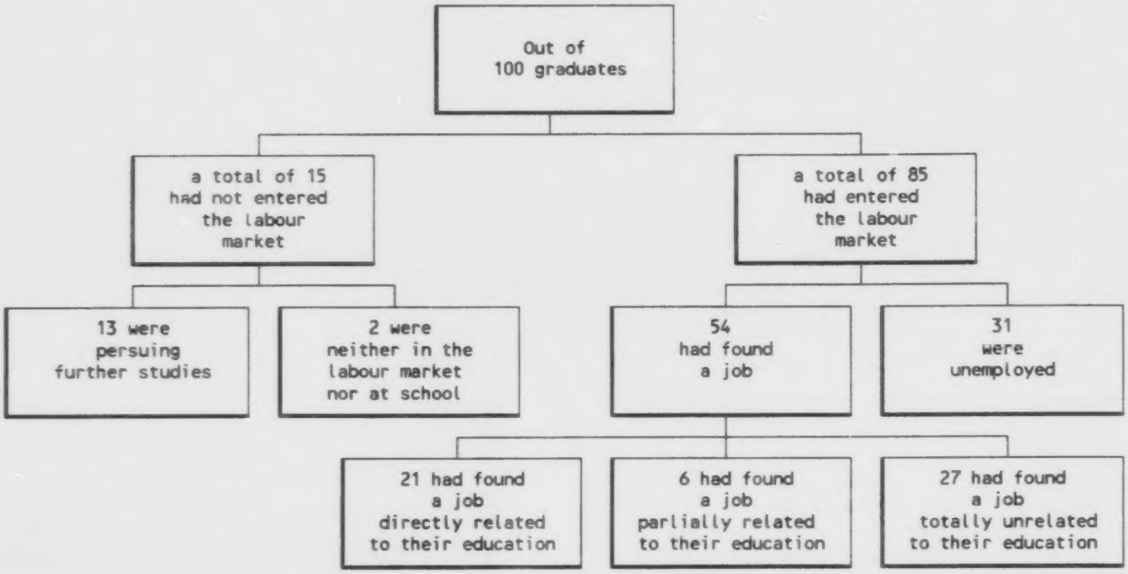
Over the coming years, the use of new materials and technological equipment should continue the trend towards the concentration of car repairs. The demand is expected to grow at a rather slow rate, thus increasing competition. Candidates with a knowledge of new repair and painting processes should enjoy better employment opportunities. Nonetheless, the overall job prospects for graduates are expected to fall slightly during the 1990s.

MAINTENANCE MECHANICS

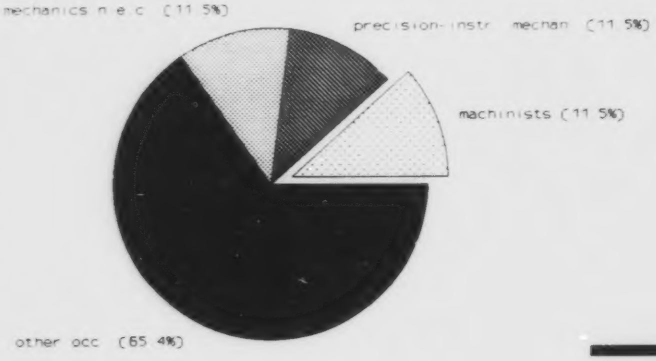
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 15 had not entered the labour market
a total of 85 had entered the labour market
13 were persuing further studies
2 were neither in the labour market nor at school
54 had found a job
31 were unemployed
21 had found a job directly related to their education
6 had found a job parlially related to their education
27 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	280	0.9	---
1985/90	90	0.8	1.0
1990/95	65	0.7	1.2
1995/2000	70	0.7	1.3

MAINTENANCE MECHANICS
SECONDARY VOCATIONAL

This field of study includes training programs for workers specializing in the maintenance and repair of industrial machinery.

Trends and projections

As for the entire secondary vocational sector, the number of graduates in this discipline dropped considerably over the 1980s to some 90 graduates annually during the second half of the decade.

Occupation after graduation

According to the 1988 Relance Survey, barely more than half of the graduates in this discipline had found jobs one year after graduation. Since only a small proportion of them decided to continue their studies, these graduates were severely affected by unemployment which reached a rate of more than 35% compared to an average of 20% for all the graduates at this level. These graduates found it even harder to enter the labour market since half of the jobs obtained bore no relation to their education and nearly 40% of them were temporary.

Occupational profile

The most directly related jobs held by these graduates were those of mechanics and machinists (35%). A larger proportion of them (40%) had succeeded in finding jobs as workers in the manufacturing and construction sectors.

General picture

As their placement statistics indicate, these graduates faced much more difficult labour market conditions than the average. These graduates are increasingly being affected by the technological changes in industrial machinery which make the maintenance and repair of industrial machinery much more complex. Thus, the traditional image of the maintenance mechanic as a "jack-of-all-trades" is increasingly being called into question as specific skills in electronics, pneumatics and mechanics are required for repair work, and preventive maintenance is left up to industrial machine operators.

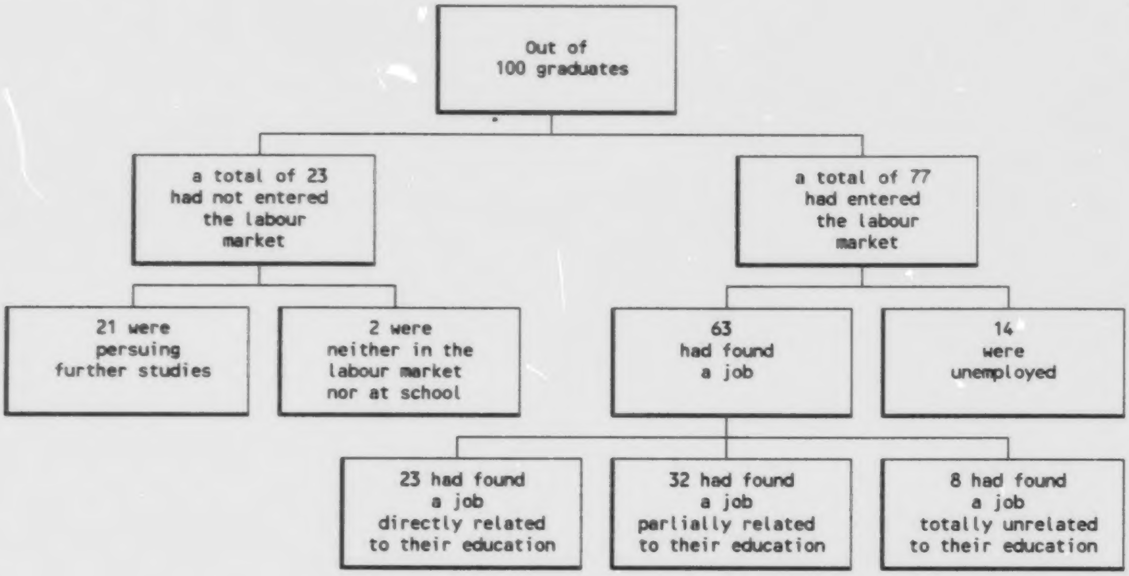
The trend of recent years should accelerate over the next decade when the emphasis will be placed on computer-aided manufacturing technologies. The new version of the education program takes into account new labour market requirements and may help to increase the employability of these graduates.

MECHANICAL ENGINEERING TECHNOLOGY

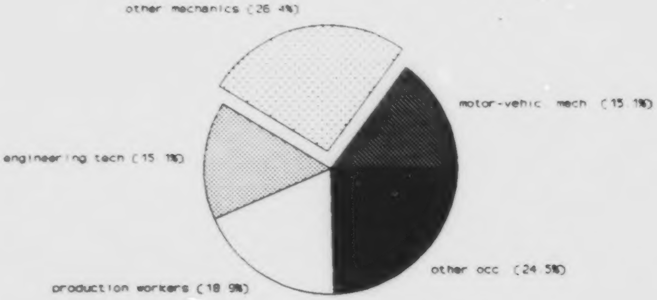
VOCATIONAL COLLEGE DIPLOMA

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 23 had not entered the labour market
a total of 77 had entered the labour market
21 were persuing further studies
2 were neither in the labour market nor at school
63 had found a job
14 were unemployed
23 had found a job directly related to their education
32 had found a job parlially related to their education
8 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	120	0.8	---
1985/90	150	1.1	1.0
1990/95	145	1.1	0.6
1995/2000	150	1.1	0.5

APPLIED SCIENCES

MECHANICAL ENGINEERING TECHNOLOGY

VOCATIONAL COLLEGE DIPLOMA

This group of disciplines includes mechanical engineering, agricultural mechanics and marine mechanics. While mechanical engineering technologies are available in all the regions, the agricultural hydraulics and marine mechanics specialties are concentrated in two establishments, namely the Institut de technologies agro-alimentaires de St-Hyacinthe and the Institut maritime du Quebec in Rimouski.

Trends and projections

From an average of 120 during the first half of the 1980s, the number of graduates reached an annual average of 150 in the second half. This average should con[illegible] through the 1990s if this field maintains the popularity it has enjoyed over the last few years.

Occupation after graduation

As in other engineering technologies, a higher than average proportion of graduates decided to pursue more advanced studies. The availability of university level training leading to an engineering degree offered by the Institut de technologies supérieures is certainly a factor in this decision. Moreover, even if a placement rate of 82% does not indicate labour market difficulties, the less favourable perception of the relation between education and work also helps to explain the desire to pursue a university degree.

Occupational profile

The jobs obtained by these graduates are clearly oriented towards occupational groups that are the most directly linked to manufacturing processes. Of these, mechanics' jobs accounted for at least 36% of entry level jobs. To this already high proportion must be added the group of aircraft assembly specialists which accounted for almost 10% of the jobs held by these graduates. For their part, engineering technicians' jobs accounted for less than 15% of graduates in these technologies.

Salary

As for all other engineering-related technologies, the average salary earned by these graduates was clearly higher than average at $21,700 annually for graduates working full time in the year after graduation.

General picture

Even if placement statistics for occupations related to these disciplines indicate lower than average market entry opportunities, they have nonetheless been favourable over the past few years. This training also enables candidates who wish to do so to complete university studies in engineering by having in hand a graduation diploma that is recognized on the labour market.

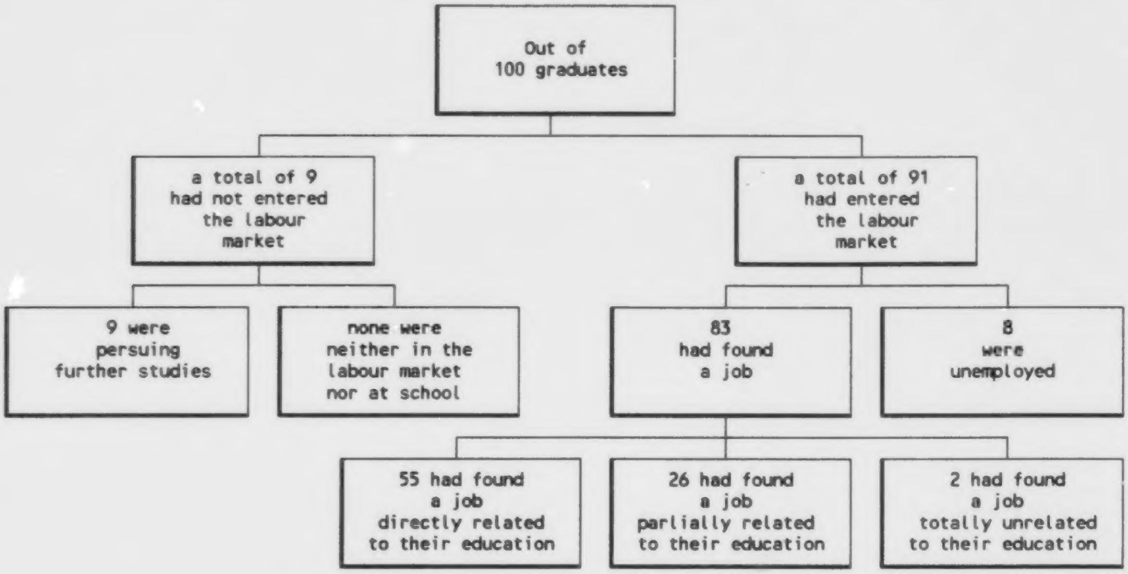
Over the next few years, forecasts of requirement growth in the occupational categories linked to these studies indicate a possible labour surplus that could translate into a shrinking of the market. Although this surplus will likely affect numerous traditionally trained workers, especially maintenance mechanics, they should not affect young graduates who are more familiar with new technologies. The latter will continue to face a labour market where shortages of qualified labour will co-exist with a surplus of less qualified labour.

MECHANICAL ENGINEERING

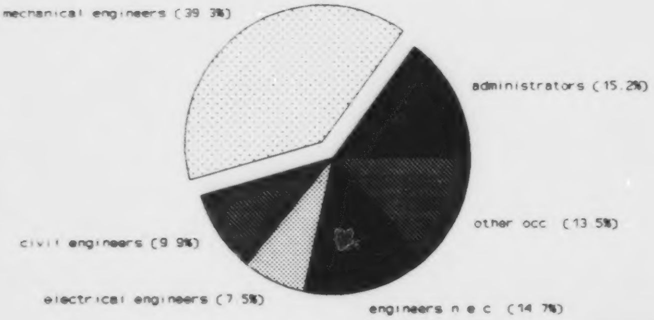
BACHELOR'S DEGREE

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 9 had not entered the labour market
a total of 91 had entered the labour market
9 were persuing further studies
none were neither in the labour market nor at school
83 had found a job
8 were unemployed
55 had found a job directly related to their education
26 had found a job parlially related to their education
2 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	480	2.2	0.9
1985/90	665	2.7	1.0
1990/95	700	2.7	0.8
1995/2000	700	2.7	0.8

APPLIED SCIENCES

MECHANICAL ENGINEERING
BACHELOR'S DEGREE

Programs in mechanical engineering are offered at Concordia, Laval, McGill, Polytechnique, Sherbrooke and École de Technologie Supérieure. Mathematics, chemistry, physics and biology are required by most universities, while the École de Technologie Supérieure recruits candidates with vocational college diplomas in mechanical engineering.

Trends and projections

During the second half of the 1980s, the proportion of these graduates tended to increase more quickly than the average. In 1980 they accounted for 20% of graduates in all engineering disciplines, while in 1990 they accounted for 30%. During the coming years, the percentage of graduates in this discipline should remain basically the same as in the late 1980s, with an average of 700 graduates a year.

Occupation after graduation

The vast majority of these graduates were employed two years after graduation, and almost all of them held jobs at least partially related too their education. Proportionately more of these graduates had decided to enter the labour market, with only 9% having decided to continue their education.

Occupational profile

According to the 1988 survey, nearly 75% of graduates who were employed two years after graduation had jobs in one of the engineering occupational groups. Mechanical engineers accounted for the largest group, but a large contingent from other engineering specialties indicates that job opportunities are not limited to mechanical engineering graduates. Besides the engineering groups, management positions provided labour market openings in the short term, since approximately 15% of graduates in mechanical engineering held management jobs two years after graduation.

Salary

According to the 1988 survey of graduates, the average annual salary of mechanical engineering graduates working full time was $29,000. This salary level puts these graduates above the average of $26,600 for graduates with bachelor's degrees taken as a whole and compares favourably with other engineering disciplines.

General picture

As in engineering disciplines generally, labour market conditions make job entry easier than average for this discipline.

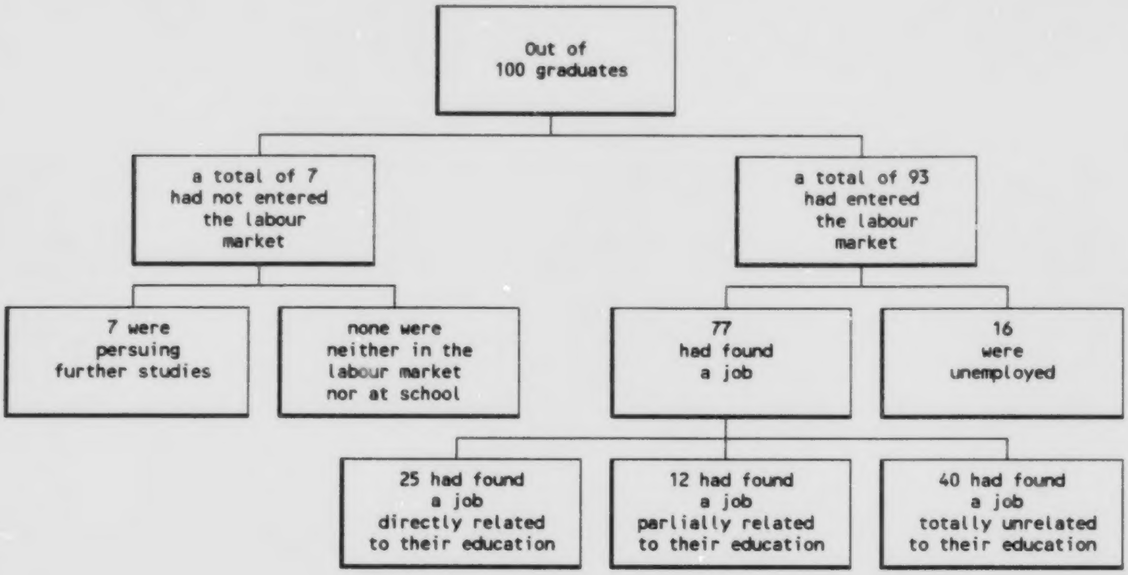
During the past five years, requirements grew more quickly than the number of graduates, thereby improving chances of placement in a job directly related to education. Although the situation is likely to reverse itself during the coming years, requirements will continue to be stimulated by major investment in technology that will be needed to meet international competition. Consequently, prospects should remain excellent throughout the 1990s.

FURNITURE-MAKING

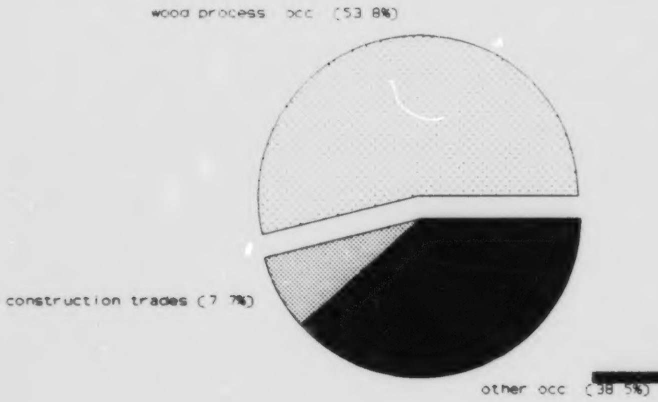
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 7 had not entered the labour market
a total of 93 had entered the labour market
7 were persuing further studies
none were neither in the labour market nor at school
77 had found a job
16 were unemployed
25 had found a job directly related to their education
12 had found a job parlially related to their education
40 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	220	0.8	0.1
1985/90	35	0.3	1.0
1990/95	20	0.2	0.5
1995/2000	20	0.2	0.6

FURNITURE-MAKING
SECONDARY VOCATIONAL

This field of study includes various programs dealing primarily with the manufacture, repair, finishing or upholstery of furniture and the molding and stratification of reinforced plastic furniture.

Trends and projections

The furniture programs have been literally deserted by students over the years. From an average of nearly 220 graduates annually during the 1980-85 period, and a high of more than 350 in the 1982 recessionary year, this number dropped to an average of some 35 graduates per year in the second half of the decade. This decline, which is much more pronounced than that of the secondary vocational sector taken as a whole, caused the relative share of secondary-school graduates to fall from nearly 0.7% to less than 0.3%. There is reason to believe that the lost ground will not be regained and that, on the contrary, this sector may even shrink slightly during the 1990s.

Occupation after graduation

More than three-quarters of the 1987 graduates in the furniture-making program were employed in 1988, representing an above-average proportion. Moreover, most of the graduates had permanent full- time positions. This performance, however, is dimmed by the fact that more than half of them were working in jobs unrelated to their area of specialization, while this proportion was only one-third for graduates taken as a whole.

Occupational profile

Various occupations related to woodworking, such as wood sawyers and sanders, cabinetmakers, lathe and milling machine operators and inspectors and workers in the wood manufacturing industry accounted for slightly more than half of the employed graduates. The wood and furniture industries are clearly the principal employers of graduates who succeed in finding a job related to their training.

Salary

The average annual salary of employed graduates was $14,000, a level slightly above the average.

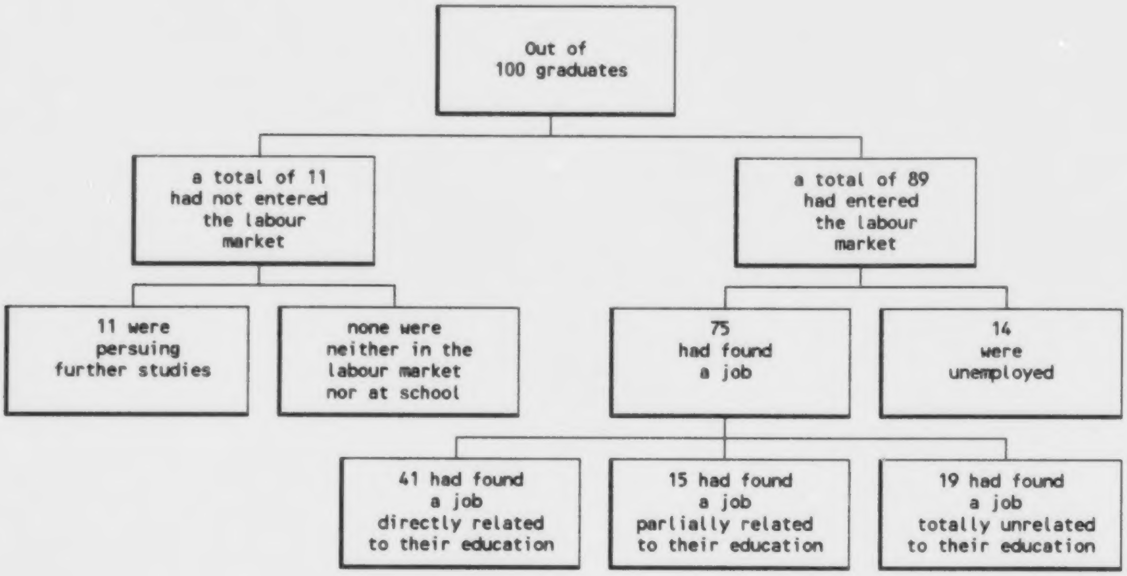
General picture

Over the past few years, placement in related occupations has been lower than the average for other disciplines at the secondary level. Again, the growing mechanization of furniture manufacturing operations is increasingly changing the qualifications sought by industrial establishments. Employers are primarily looking for specialized operators of machines that are often computer-controlled, rather than traditional cabinetmakers. In this respect, college graduates in manufacturing technology may be serious competitors for these jobs. Even if until now their number has been very small, college graduates for their part seem to enjoy better market entry conditions.

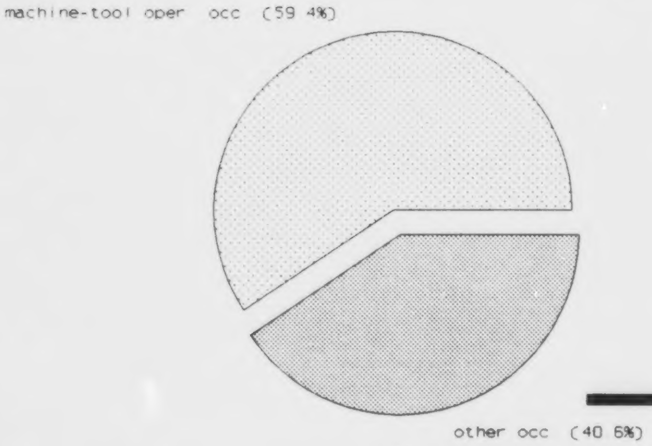
In the short term, job opportunities may be further dimmed by the economic slump in Quebec's furniture industry. This industry is being adversely affected, with a delay of one or two years, by residential construction which experienced some difficulties in 1989 and 1990.

MACHINING **APPLIED SCIENCES**
SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 11
had not entered
the labour
market
a total of 89
had entered
the labour
market
11 were
persuing
further studies
none were
neither in the
labour market
nor at school
75
had found
a job
14
were
unemployed
41 had found
a job
directly related
to their education
15 had found
a job
partially related
to their education
19 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	1570	5.3	0.1
1985/90	485	4.2	1.0
1990/95	380	4.0	0.8
1995/2000	400	4.0	0.8

MACHINING
SECONDARY VOCATIONAL

This field of study involves occupations related to machine-tool operation including the jobs of tool and die maker and plastic molder-stratifier.

Trends and projections

The decline in secondary vocational school enrolment affected these disciplines in particular as the number of their graduates dropped by more than two-thirds. Despite the significant drop in enrolment, these disciplines are among the most popular, accounting for more than 40% of secondary vocational graduates.

Occupation after graduation

Three out of four graduates were employed one year after graduation. Some 10% of graduates in this field had decided to continue their studies. The unemployment rate for these graduates was 15%, i.e. a smaller proportion than the 20% unemployment rate for their colleagues in other disciplines. The jobs obtained were more clearly related to education than the average. In fact, three-quarters of employed graduates felt they held jobs that were at least partially related to their training. More than 95% of them held full-time jobs.

Occupational profile

Nearly 60% of the positions held by these graduates were machining jobs. Of these, the machinists' group was by far the largest with about 55% of the jobs. Most of the remaining jobs were closely related to production in manufacturing plants.

Salary

The average annual salary of graduates working full time was $16,700 one year after graduation.

General picture

In recent years, these graduates have enjoyed above-average employment opportunities. One of the reasons for this is the vigorous growth of the main sectors providing employment for these graduates, particularly the transportation equipment, metal products, machinery and plastics industries. Shortages of qualified machinists and plastic molders have also favoured the entry of these graduates into the labour market in the same manner as their colleagues in mechanical manufacturing at the college level.

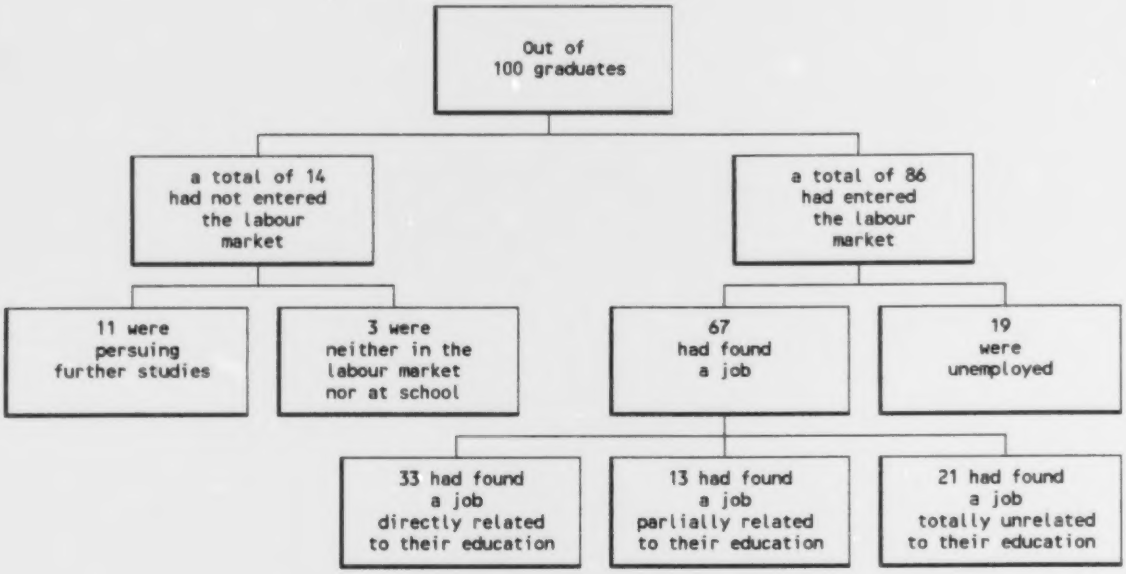
Over the next few years, a somewhat tighter labour market is expected primarily because of the slower growth of manufacturing jobs. The increase in the number of machinists will also continue to be adversely affected by the more intensive introduction of computer-aided manufacturing processes which tend to eliminate opportunities for machinists with intermediate skills in favour of machinists with a knowledge of digitally-controlled machine tools. Candidates with these skills will face a better than average employment outlook.

METALLURGY

SECONDARY VOCATIONAL

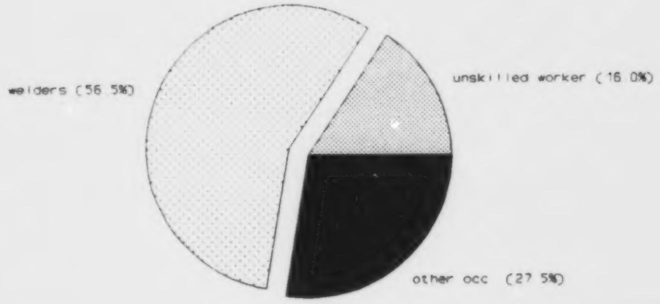
APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 14
had not entered
the labour
market
a total of 86
had entered
the labour
market
11 were
persuing
further studies
3 were
neither in the
labour market
nor at school
67
had found
a job
19
were
unemployed
33 had found
a job
directly related
to their education
13 had found
a job
parlially related
to their education
21 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	940	3.2	---
1985/90	325	2.8	1.0
1990/95	240	2.6	0.5
1995/2000	255	2.6	0.3

METALLURGY
SECONDARY VOCATIONAL

This field of study includes programs in welding, sheet-metal mechanics and metal construction.

Trends and projections

This vast field of study, which trained an average of some 940 graduates each year in the first half of the 1980s, recently recorded a more modest performance with an estimated 325 graduates annually during the 1985-1990 period. Nonetheless, it remains one of the most popular fields of study, with nearly 3% of all graduates. Given the trend of the past few years, the number of graduates is expected to drop to about 240 to 250 annually over the next ten years.

Occupation after graduation

Both the 67% employment rate and the 19% unemployment rate correspond to the average of secondary vocational graduates taken as a whole. Almost all the workers had full-time jobs and two-thirds of them held jobs that required qualifications directly or partially related to their occupational skills.

Occupational profile

Only one occupational group, that of welders, accounted for nearly half the jobs held by graduates in this field of study. In terms of industrial sectors, one-quarter are concentrated in the metal products sector and about 10% in the transportation material and construction sectors.

Salary

Employed graduates reported a salary of about $15,600, i.e. $2,000 more than the average salary of employed secondary vocational graduates taken as a whole.

General picture

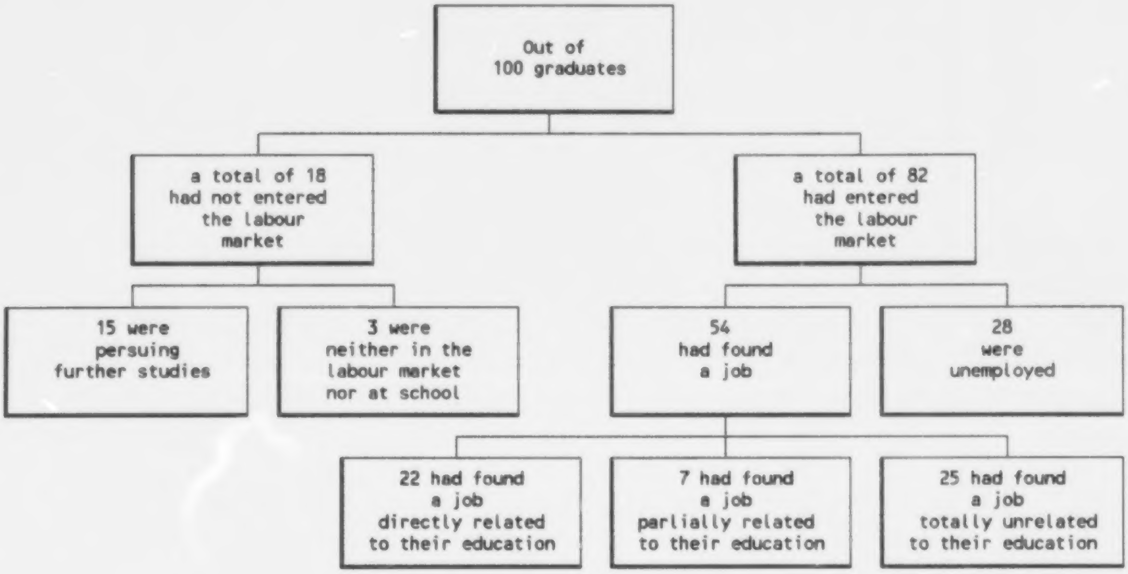
Although the overall employment opportunities for these graduates are comparable to the average, demand for these professionals tends to fluctuate considerably. In the manufacturing industries, where production takes place in a series of steps, welding tasks are among those that can most easily be automated, thus reducing demand for these workers. Other industries that are less centred on serial production are less likely to automate their operations. Nonetheless, their requirements with respect to task precision or related skills in blueprint reading are generally higher. This is notably the case for welders-assemblers and those working in the construction sector.

INDUSTRIAL WORK

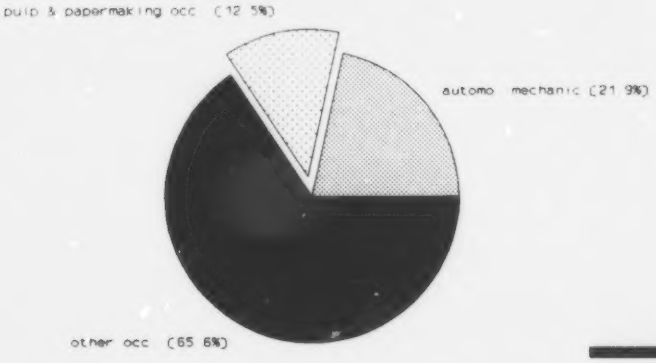
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 18
had not entered
the labour
market
a total of 82
had entered
the labour
market
15 were
persuing
further studies
3 were
neither in the
labour market
nor at school
54
had found
a job
28
were
unemployed
22 had found
a job
directly related
to their education
7 had found
a job
parlially related
to their education
25 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	95	0.3	0.1
1985/90	60	0.5	1.0
1990/95	50	0.5	0.6
1995/2000	50	0.5	0.6

APPLIED SCIENCES

INDUSTRIAL WORK
SECONDARY VOCATIONAL

This field of study includes training in the operation of industrial production machinery and stationary steam engines and assembly-line work.

Trends and projections

Like the entire vocational sector, enrolment in this field declined over the 1980s. Nonetheless, this downtrend has been less pronounced in these disciplines which saw their number of graduates increase somewhat.

Occupation after graduation

Most graduates entered the labour market after graduation. Their placement rate was well below the average, which translated into a high unemployment rate of nearly 35%. Only a small number of the jobs obtained were related to education. Thus, 53% of young employed graduates considered their jobs to be at least partially related to their education compared to a proportion of 65% for secondary professional graduates overall.

Occupational profile

Jobs related to manufacturing, assembling and repair of manufactured products represented at least 67% of the jobs obtained by these graduates. Most of them were working as unskilled workers (29%) but a high proportion (22%) held jobs as car mechanics.

Salary

Despite the low placement rate reported by these graduates, the average income of survey respondents working full time was $18,500 one year after graduation, representing a higher salary level than that of secondary vocational graduates taken as a whole.

General picture

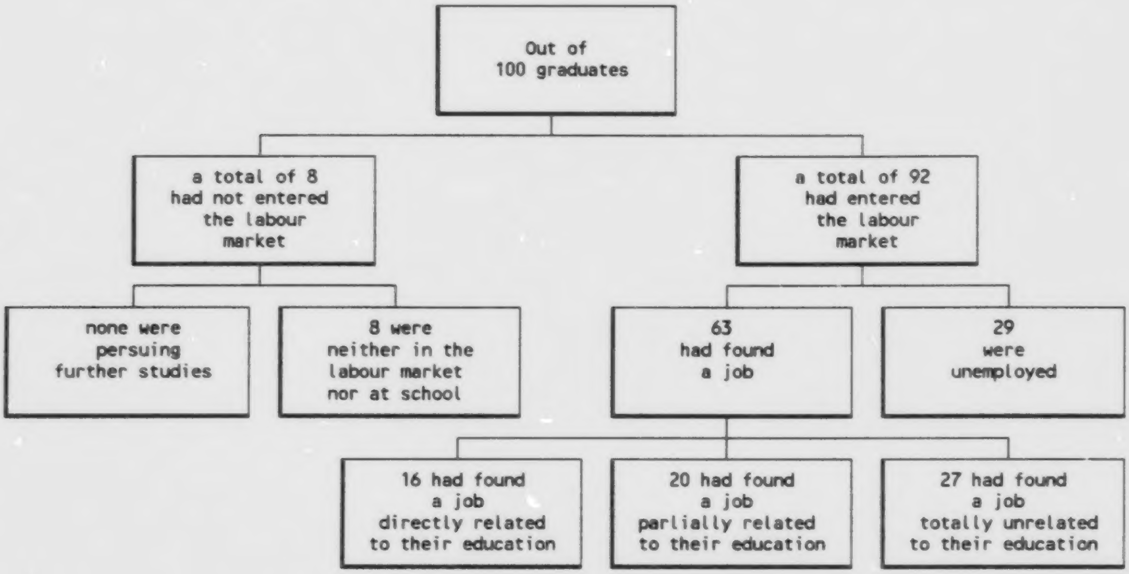
Graduates in these disciplines faced more difficulties in entering the labour market than their colleagues in other fields of training. As a large proportion of entry-level jobs are not very specialized, these graduates risk being adversely affected by technological changes which will introduce changes in production equipment and increase the qualification requirements for industrial machine operators. During the coming decade, employment prospects for these graduates should remain below the average of other disciplines at the secondary level.

PRIMARY INDUSTRIES

APPLIED SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation



Out of 100 graduates

a total of 8 had not entered the labour market

a total of 92 had entered the labour market

none were persuing further studies

8 were neither in the labour market nor at school

63 had found a job

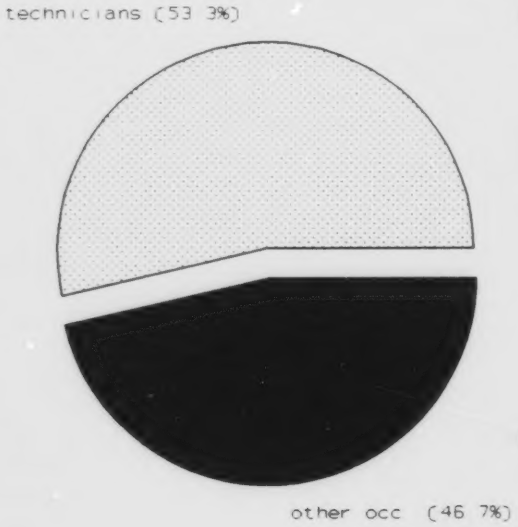
29 were unemployed

16 had found a job directly related to their education

20 had found a job parlially related to their education

27 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	75	0.5	0.1
1985/90	30	0.2	1.0
1990/95	20	0.2	1.0
1995/2000	20	0.2	0.9

This field of study encompasses disciplines related to the development of mineral and marine resources. These disciplines are taught primarily in four regions, namely the Abitibi and Mauricie- Bois-Francs regions for mineral development and the North Shore and Gaspé regions for marine resources.

Trends and projections

After peaking during the 1983-1985 period, the number of graduates returned to its usual level of 25 to 40 graduates annually.

Occupation after graduation

The participation rate in the labour market remained high even though placement was lower than average. These two combined factors resulted in a high unemployment rate among these graduates of 31.5% of the labour force on the market. The situation appeared all the more difficult since barely 17% of them held a job that was directly related to their education, compared to 45% for other graduates, and since 60% of the jobs were at least partially related. The seasonal slowdown in the fishing sector and in prospecting activities at the time of the Relance Survey partly explains the difficult situation described by the data. Opportunities for temporary jobs may be added to permanent jobs at other times during the year.

Occupational profile

About 45% of employed graduates held jobs as technicians in the fields of biology, physics or engineering. This last category includes the occupations of geophysical prospecting surveyor, geological draughtsman/woman and mining technicians. Occupations related to fishing did not figure in the occupational profile of these graduates. Mining industries specializing in services to companies provided graduates with the most employment opportunities, with 35% and 25% of the jobs offered.

General picture

In general and despite greater opportunities at other times during the year, the employment outlook for these graduates seemed appreciably more difficult than for the average of the other vocational college graduates. Although mining has resumed in Abitibi, employment levels remain somewhat depressed in the non-metallic mining sector. On the other hand, these graduates must face competition from their university counterparts in geological sciences who have an easier time getting jobs as physical science technicians because of difficult market entry conditions.

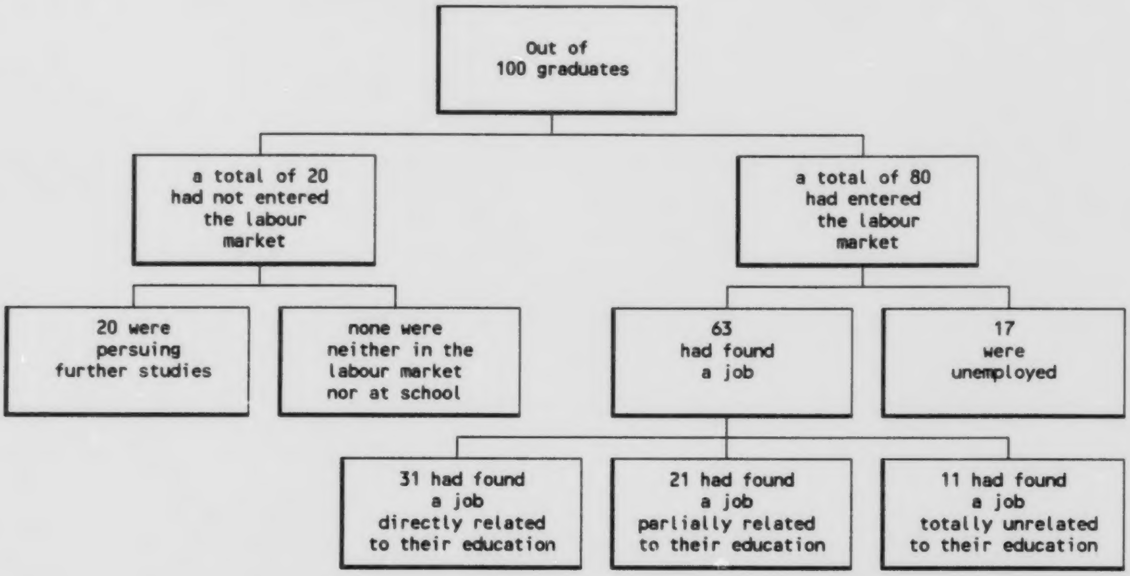
Given the expected growth in the demand, the outlook for entering the labour market for these graduates over the next few years should remain more or less the same as at present. In these circumstances, they will continue to face a less favourable than average labour market.

RESOURCE PROCESSING TECHNOLOGIES

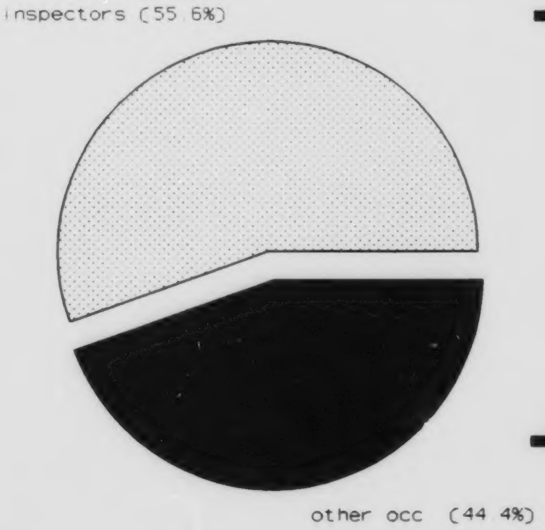
VOCATIONAL COLLEGE DIPLOMA

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 20 had not entered the labour market
a total of 80 had entered the labour market
20 were persuing further studies
none were neither in the labour market nor at school
63 had found a job
17 were unemployed
31 had found a job directly related to their education
21 had found a job partially related to their education
11 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	65	0.4	---
1985/90	65	0.4	1.0
1990/95	60	0.5	0.8
1995/2000	65	0.5	0.9

APPLIED SCIENCES

RESOURCE PROCESSING TECHNOLOGIES

VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses disciplines oriented towards the teaching of manufacturing production technology linked to agricultural and marine (food technologies) and forestry resources (wood and paper). Teaching institutions that offer these disciplines are usually located in the regions that exploit these natural resources, namely Abitibi, Mauricie-Bois-Francs and Quebec City for forestry products, the Gaspé for marine products and the Montérégie for food technologies.

Trends and projections

The number of graduates in these disciplines did not exceed 100 during the 1980s.

Occupation after graduation

According to the 1988 Relance Survey, a proportionally smaller number of graduates who entered the labour force after graduation found jobs. However, the jobs were related to education,for the most part.

Occupational profile

About 80% of the jobs available to these graduates were related to processing operations while the jobs of technician were more or less absent from their occupational profile. Thus, more than 55% of employed graduates were working as product quality inspectors in the food or paper sector. Food processing companies provided the most opportunities, with 65% of the job openings; pulp and paper followed with 20% of the openings.

General picture

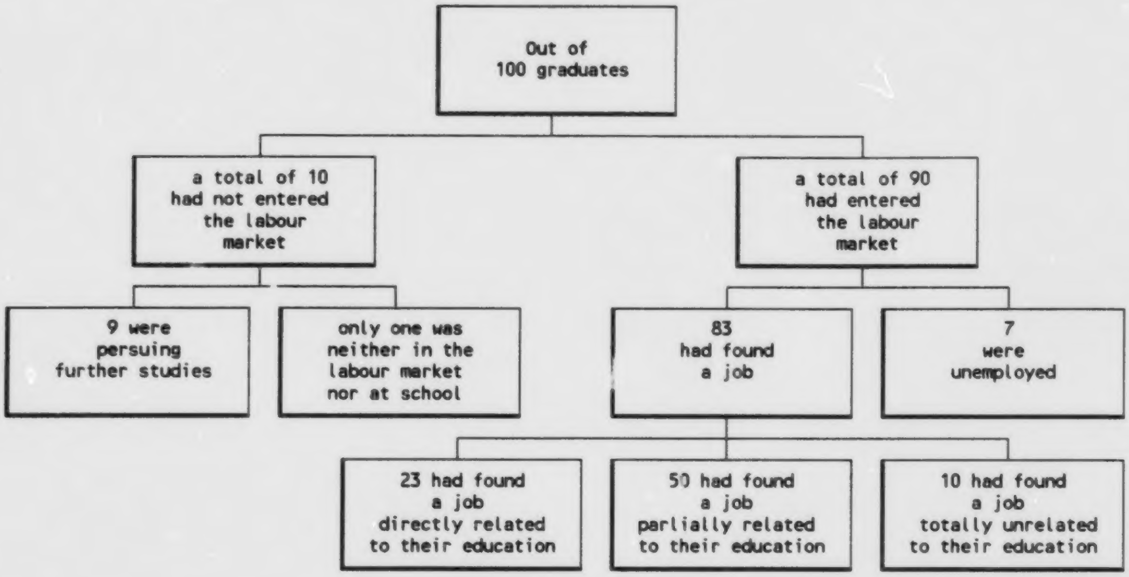
Graduates in these disciplines are restricted to a relatively limited number of occupations and sectors of activity. While limiting the occupational mobility of graduates to a certain extent, this specialization allows a closer link between potential employers and teaching institutions and a better identification of the industry's needs. The industry therefore has easier access to this specialized labour pool when recruitment requirements arise. For this reason, employment opportunities in these disciplines should remain comparable to the average over the next decade.

INDUSTRIAL ENGINEERING TECHNOLOGIES

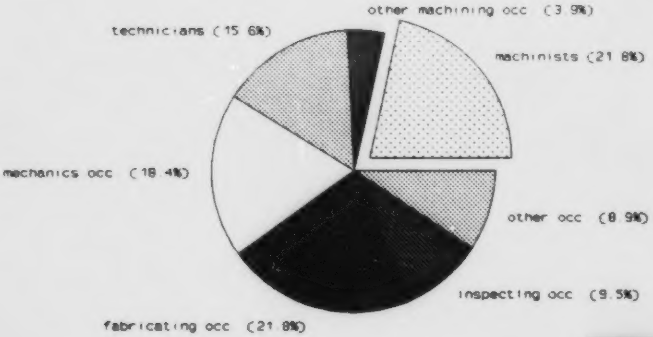
APPLIED SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 10
had not entered
the labour
market
a total of 90
had entered
the labour
market
9 were
persuing
further studies
only one was
neither in the
labour market
nor at school
83
had found
a job
7
were
unemployed
23 had found
a job
directly related
to their education
50 had found
a job
parlially related
to their education
10 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	365	2.5	0.1
1985/90	325	2.3	1.0
1990/95	300	2.3	0.8
1995/2000	310	2.3	0.7

APPLIED SCIENCES

INDUSTRIAL ENGINEERING TECHNOLOGIES

VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses disciplines that provide training for technicians oriented towards industrial production. This field includes the technologies of plastics processing, production and manufacturing, quality control, metallurgical processes and mechanical manufacturing.

Trends and projections

After a rapid growth very early in the decade, the number of graduates increased at a rate comparable to the average. Thus, during the 1980s, these disciplines accounted for 2.3% of the graduates in the vocational college sector. If this trend continues over the 1990s, an average of 300 students will graduate each year.

Occupation after graduation

As for all other engineering technologies at the college level, the participation rate of these graduates was higher than that of the vocational college sector taken as a whole. Entry into the labour market was not too difficult for these graduates since 92% of those who did not continue their studies were employed one year after graduation. Their jobs were also more often related to their education even if according to the graduates this relation was more often than not indirect. Almost all the jobs obtained were permanent and full time.

Occupational profile

About 45% of employed graduates were working in jobs related to manufacturing operations or support. Of these, the most common were jobs related to aircraft assembly and those of mechanics and machinists which accounted for 11%, 19% and 22% respectively of the entry-level jobs. The jobs of technicians, whose tasks are more oriented towards design support, were less numerous but nonetheless provided more than 15% of these graduates with jobs.

Salary

The average income of graduates who were working full time one year after completing their studies was $22,600 in 1988.

General picture

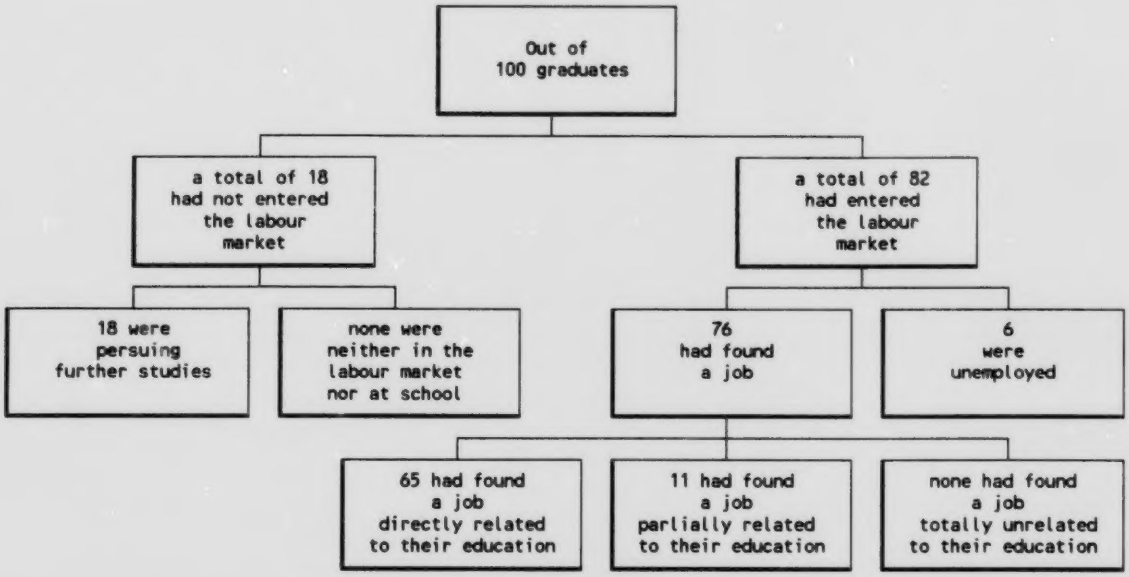
After the 1981-82 recession, the increase in employment opportunities was a boon to these graduates and job prospects improved appreciably. Over the next few years, the requirement in related occupations should grow to a smaller extent. However, the introduction of new technologies will continue to favour workers who have the new required skills. In this respect, young people trained in the new technologies will have a marked advantage over other candidates. This advantage should make it possible to maintain excellent employment opportunities.

CHEMICAL ENGINEERING

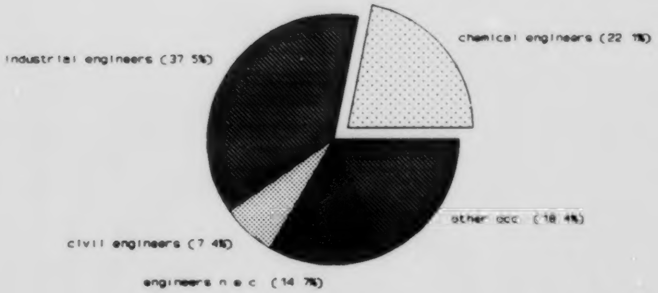
BACHELOR'S DEGREE

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 18 had not entered the labour market
a total of 82 had entered the labour market
18 were persuing further studies
none were neither in the labour market nor at school
76 had found a job
6 were unemployed
65 had found a job directly related to their education
11 had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	130	0.6	---
1985/90	170	0.7	1.0
1990/95	175	0.7	0.3
1995/2000	175	0.7	0.4

CHEMICAL ENGINEERING
BACHELOR'S DEGREE

Laval, Sherbrooke, Polytechnique and the Trois-Rivières campus of the University of Quebec offer programs in chemical engineering. Mathematics, physics, chemistry and biology are prerequisites.

Trends and projections

The number of graduates in this discipline grew at a rate comparable to the average for bachelor's degrees during the 1980s. If this trend continues during the coming years, an average of 175 students will graduate in this discipline every year up to the year 2000.

Occupation after graduation

As in the case of other engineering disciplines, the labour market participation rate of these graduates is significantly higher than for graduates with bachelor's degrees taken as a whole. Moreover, the placement rate is quite comparable to that for other engineering disciplines. Two years after graduation, the unemployment rate was low, and most employed graduates were working in occupations at least partially related to their education.

Occupational profile

More than 80% of graduates working two years after graduation held jobs in one or another of the engineering groups. The group of chemical engineers accounts for more than 20% of jobs, but even more of these graduates were working as industrial engineers (35%). Fewer graduates in this specialty than in other engineering disciplines worked in the administrators group.

Salary

The average salary ($31,700) of respondents to the 1988 survey who were working full time two years after graduation was markedly above the average for graduates with bachelor's degrees taken as a whole.

General picture

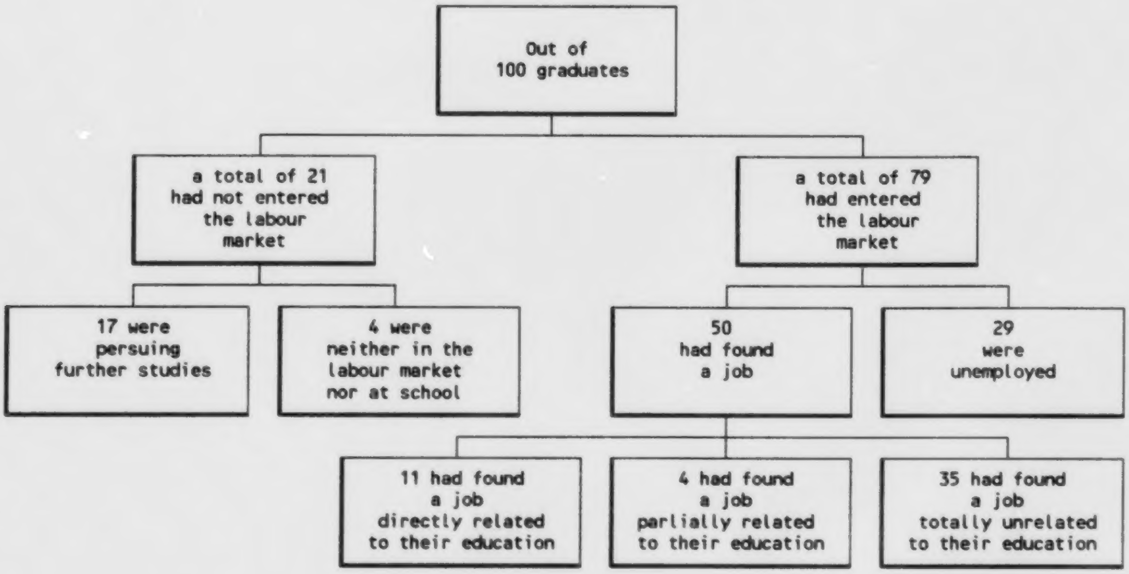
The labour market for these graduates over the past five years has offered job opportunities very much better than the average. Requirements, which had dropped drastically during the recession in the early 1980s, especially in the chemical and oil industries, moved back to previous levels during the second half of the decade. A proportion much greater than average said they were very satisfied, and nearly 90% said they would make the same academic choice if they had to start over.

During the 1990s, the market is expected to tighten up somewhat, as requirements drop, especially during the first half of the decade. Prospects should nevertheless be better for future graduates in this field of study than for graduates with bachelor's degrees in most other disciplines.

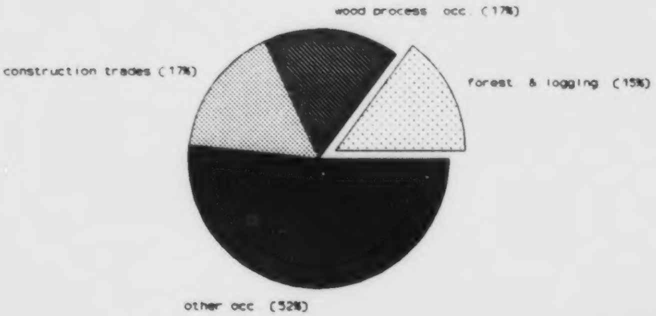
FORESTRY
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 21 had not entered the labour market
a total of 79 had entered the labour market
17 were persuing further studies
4 were neither in the labour market nor at school
50 had found a job
29 were unemployed
11 had found a job directly related to their education
4 had found a job parlially related to their education
35 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	435	1.5	---
1985/90	180	1.6	1.0
1990/95	205	2.2	0.3
1995/2000	215	2.2	0.3

FORESTRY
SECONDARY VOCATIONAL

The various forestry specialties are designed to train woods workers, wildlife conservation officers, forest rangers, grader-scalers or sawyer-graders.

Trends and projections

Like most secondary vocational fields of study, forestry has experienced a significant decline in enrolment over the past few years. While an average of nearly 400 students graduated each year during the first half of the last decade, this number dropped to about 200 in the second half, and may remain more or less at this level over the coming decade.

Occupation after graduation

The situation of forestry graduates is not very promising. In the year after graduation, only 50% of the graduates succeeded in finding work, and less than one-third held jobs directly or partially related to their education. More than one-fifth of these jobs were temporary. Finally, nearly three out of ten graduates were unemployed compared to one out of six for secondary vocational graduates taken as a whole.

Occupational profile

Despite the relatively small proportion of those employed, forestry graduates can be found in a large number of occupations. In fact, the class of 1987 is working in 31 different occupations. Nonetheless, when the graduates are considered as a whole, three main job categories can be identified, each accounting for 15% of employed graduates. The first includes forest-related occupations, the second, jobs in the wood sector and the third, jobs in the construction sector.

Salary

One year after graduation, the average annual salary of graduates in the field of forestry who were working full time was about $14,500, i.e. $1,000 more than the average salary earned by secondary vocational graduates.

General picture

The placement statistics for these graduates are dimmed considerably by the fact that the graduate survey was conducted in the spring, a time of year when forestry activity is at its lowest level. Seasonal jobs may therefore be added at other times of the year. Nonetheless, these graduates are adversely affected by competition from college graduates in forest technology. Although the latter also have difficulty entering the labour market, they can more easily capitalize on the fields of expertise of secondary-school graduates.

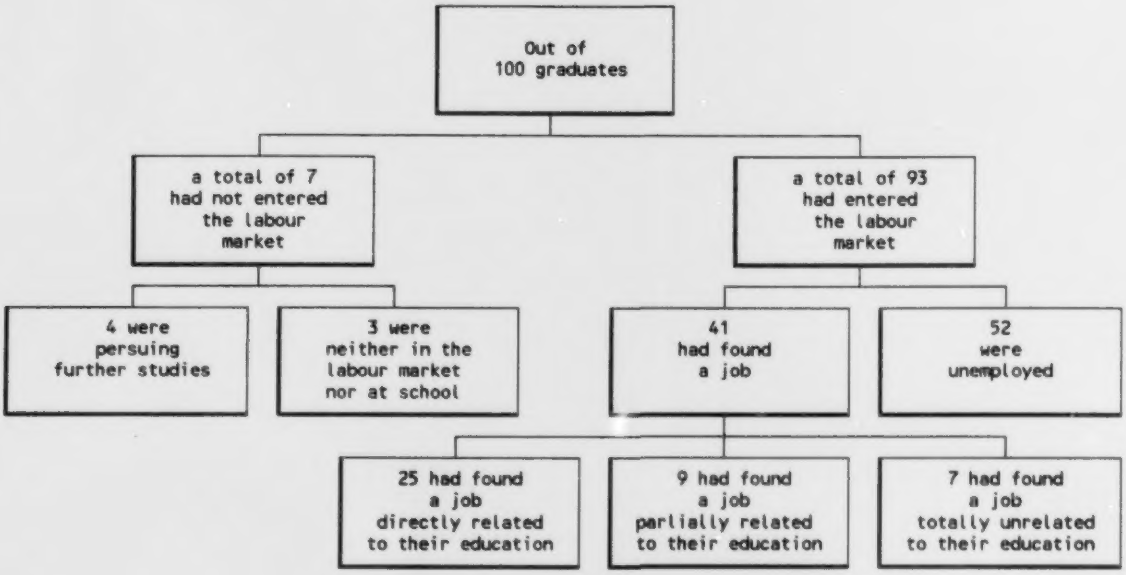
In general, the advanced mechanization of forestry operations appears to be greatly decreasing the requirement in related jobs. Nevertheless, reforestation policies and greater concern about forest management constitute positive factors. The market situation during the 1990s is expected to remain comparable to that of recent years.

FORESTRY TECHNOLOGY

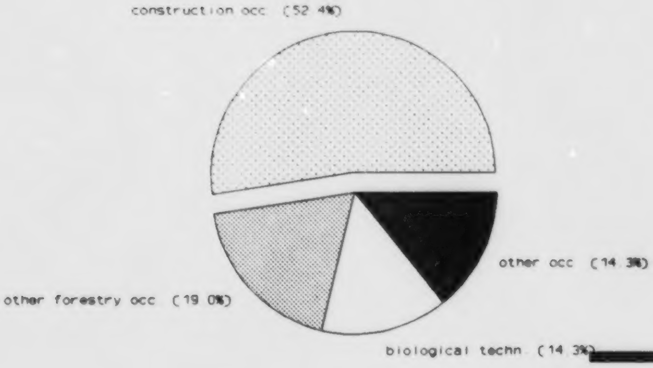
APPLIED SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 7 had not entered the labour market
a total of 93 had entered the labour market
4 were persuing further studies
3 were neither in the labour market nor at school
41 had found a job
52 were unemployed
25 had found a job directly related to their education
9 had found a job partially related to their education
7 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	150	1.0	---
1985/90	115	0.8	---
1990/95	105	0.8	---
1995/2000	110	0.8	---

FORESTRY TECHNOLOGY

VOCATIONAL COLLEGE DIPLOMA

The programs of study in forest management and forest harvesting are offered in a rather limited number of institutions located primarily in the Lower St. Lawrence, North Coast, Gaspé, Quebec City and Saguenay-Lac St-Jean regions.

Trends and projections

The number of graduates in these disciplines increased at a faster than average rate over the 1977-1982 period. Subsequently, their popularity slumped while the declining number of graduates in these disciplines preceded the drop in graduates at the college level taken as a whole by two years.

Occupation after graduation

The presence of these graduates on the labour market was very strong since 93% of them were employed at the time the Relance Survey was conducted, despite a disastrous unemployment rate of 55.9%. At barely 40%, the placement rate for this discipline was one of the lowest in the vocational college sector. These rather negative statistics should nonetheless be attenuated by the fact that this survey was carried out in the spring, a time of year when forestry activity is at its lowest level. Thus, the employed respondents were those who had found permanent jobs. In the summer and fall temporary jobs are available which provide job opportunities for a greater number of graduates.

Occupational profile

The large majority of graduates who were employed at the time of the survey were working in the forestry sector (70%), in the forestry industry (58%) or in the public service (13%). More than 50% of them held jobs as conservation workers. The occupation of biology technician also provided a possible means of entry into the labour market.

Salary

The average salary of respondents to the survey who were working full time one year after completing their studies was $20,900 in 1988.

General picture

The statistics on these graduates' entry into the labour market are among the poorest in the vocational college sector. These statistics, however, are only an indication of permanent employment opportunities and do not reflect actual opportunities for seasonal work during peak periods in the forestry sector (summer, fall, winter). These workers are also concentrated in regions that are the most affected by unemployment, which greatly reduces the variety of jobs available, as evidenced by the occupational profile of the graduates.

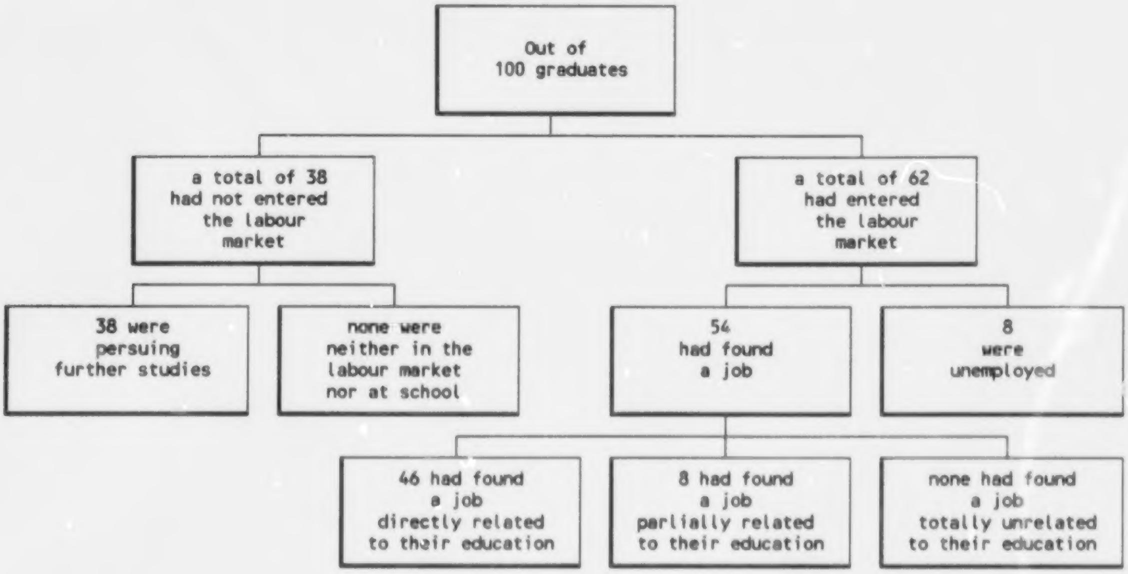
Reforestation policies and greater concern about forest management on the part of governments and private corporations will constitute growth factors for these professionals over the next decade. Despite increased demand, the seasonal nature of work in this sector will remain an important aspect. The same is true for most activities based on the development of natural resources.

FORESTRY

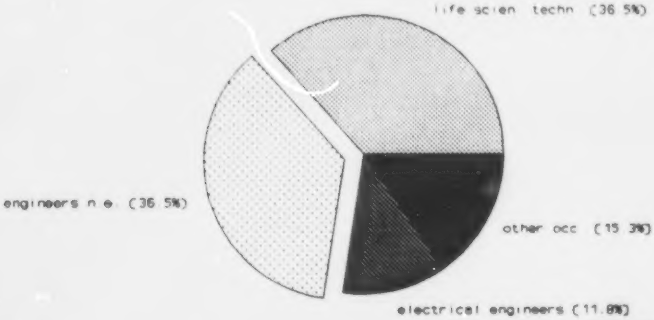
BACHELOR'S DEGREE

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 38 had not entered the labour market
a total of 62 had entered the labour market
38 were persuing further studies
none were neither in the labour market nor at school
54 had found a job
8 were unemployed
46 had found a job directly related to thair education
8 had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	85	0.4	1.0
1985/90	80	0.3	1.0
1990/95	90	0.4	1.0
1995/2000	90	0.3	1.0

FORESTRY
BACHELOR'S DEGREE

This group of fields of study comprises forestry engineering, landscape architecture, silviculture, forest management and other forestry sciences. Laval University offers various programs in forestry, and the University of Montréal offers a bachelor's degree in landscape architecture. In addition to a Diploma of Collegial Studies, mathematics, chemistry, physics and biology are prerequisites.

Trends and projections

The number of graduates in these various disciplines has not been very high and has remained more or less constant throughout the 1980s. If the current trend continues over the coming decade, an average of 90 students a year will graduate in these fields from Quebec institutions.

Occupation after graduation

A greater than average number of these graduates do not enter the labour market immediately after graduation. This is probably attributable to a higher unemployment rate. Among those who had found employment two years after obtaining their degrees, the link between education and work was very strong.

Occupational profile

Two occupational groups were strongly represented among employed graduates. They were forestry engineers and biology technicians, each group accounting for 35% of jobs.

Salary

The average annual salary of employed respondents to the 1988 survey was $26,500, comparable to the average for graduates with bachelor's degrees taken as a whole.

General picture

During the second half of the 1980s, these graduates faced a labour market offering job opportunities comparable to the average for graduates with bachelor's degrees. A slightly lower than average proportion would take the same program if they could start over.

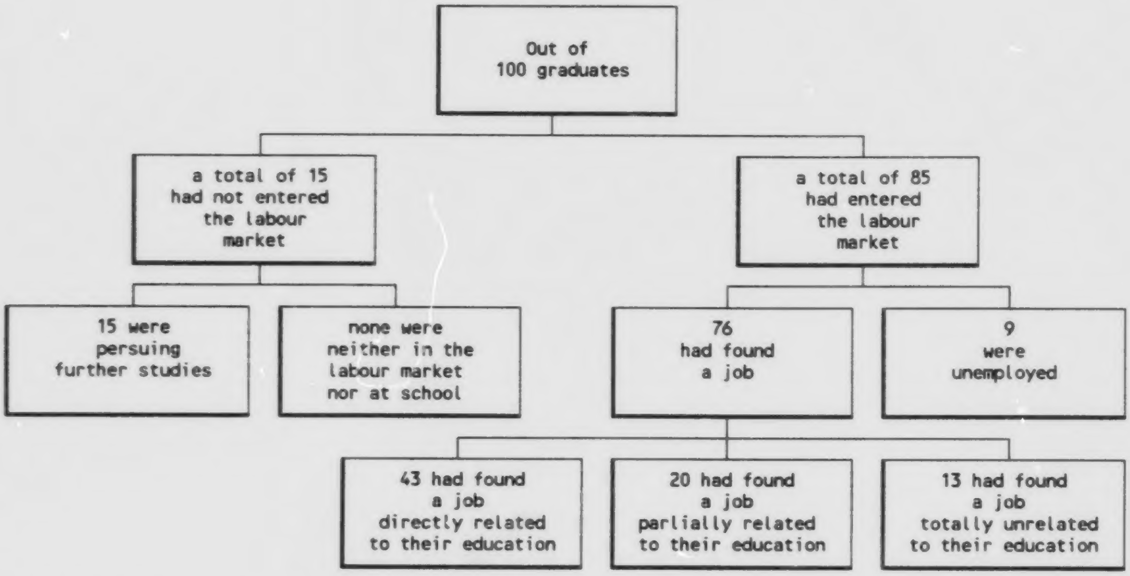
Over the coming decade, job opportunities are not expected to vary greatly. The market should offer the same prospects on average as for graduates with bachelor's degrees in other disciplines.

TRANSPORT TECHNOLOGIES

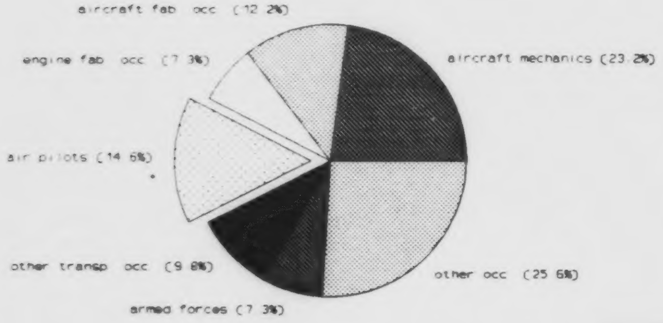
APPLIED SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 15 had not entered the labour market
a total of 85 had entered the labour market
15 were persuing further studies
none were neither in the labour market nor at school
76 had found a job
9 were unemployed
43 had found a job directly related to their education
20 had found a job parlially related to their education
13 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	65	0.4	---
1985/90	75	0.5	1.0
1990/95	65	0.5	0.9
1995/2000	70	0.5	0.8

TRANSPORT TECHNOLOGIES

VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses the specialized technologies of navigation, piloting and aircraft maintenance. It does not include technologies related to the manufacturing of transport equipment, which are classified with mechanical and industrial process engineering.

Trends and projections

The various institutions train only a very small number of these graduates each year. However, the number of graduates has increased slightly more rapidly than the entire vocational college sector over the second half of the last decade. If recent trends continue, an average of 70 graduates per year is expected during the 1990s.

Occupation after graduation

A proportion of graduates comparable to the average were continuing their studies one year after graduation. Of those who entered the labour market, the placement rate was 90%, which is high but nonetheless comparable to the average. The relation between education and work was perceived by the employed graduates as being more direct than the average. About 95% of the jobs obtained were full time and 80% of them were permanent.

Occupational profile

While deck officers were under-represented in relation to the number of navigation graduates, pilots accounted for a significant proportion of the jobs obtained (14%). The transport support personnel group provided far more numerous entry-level jobs. However, the groups of aircraft and motor mechanics and assemblers provided the most market entry opportunities, with 24%, 13% and 7% respectively of the jobs held by graduates one year after completing their studies. Specializing primarily in maintenance, most of these graduates were hired by companies in the transport sector (45% of jobs). Transport equipment manufacturing companies equipment recruited 25% of these graduates and government institutions, 10%.

Salary

The average annual salary of $22,900 for graduates who were working full time placed them at the top among the various college disciplines.

General picture

The transport sector, which suffered considerably during the 1981-82 recession, recovered quickly during the second half of the last decade. The recovery gave rise to a significant increase in the demand for labour, which favoured these graduates. The deregulation of the sector, the globalization of markets and the rationalization of the activities they create as well as the economic elements causing fuel prices to rise are all factors that will probably make it unlikely to sustain the growth of the past few years.

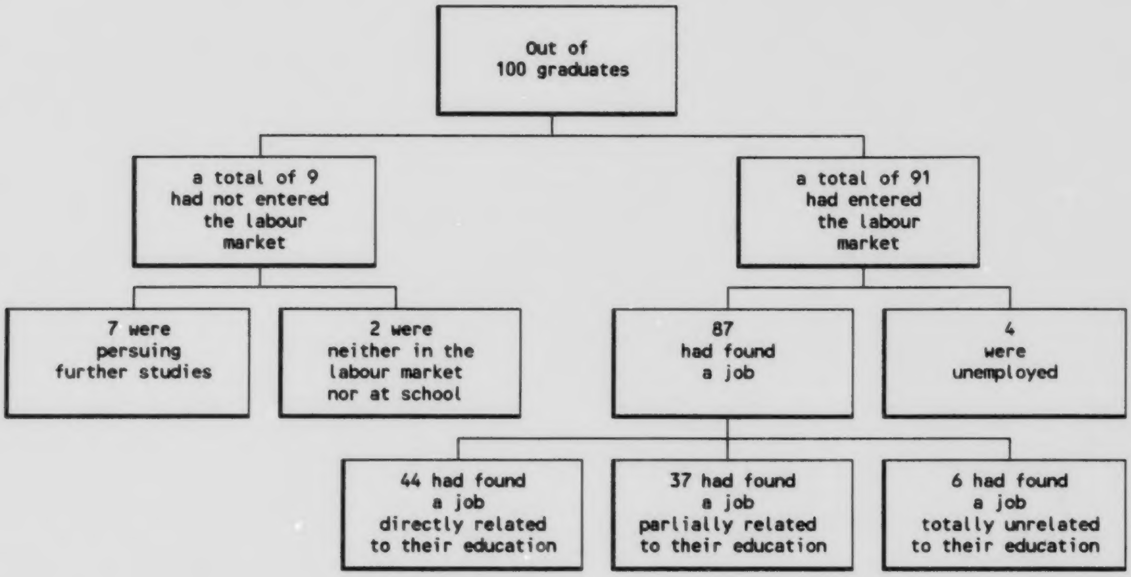
Thus, aircraft maintenance workers will see a tightening of the market. These workers can nonetheless count on the vigourous manufacturing sector which includes in its ranks world leaders such as Bombardier and Pratt & Whitney to maintain above average employment opportunities. In other respects, shortages of pilots (aircraft and helicopters) are also expected during the next decade due to the aging of the current labour force.

OTHER ENGINEERING TECHNOLOGIES

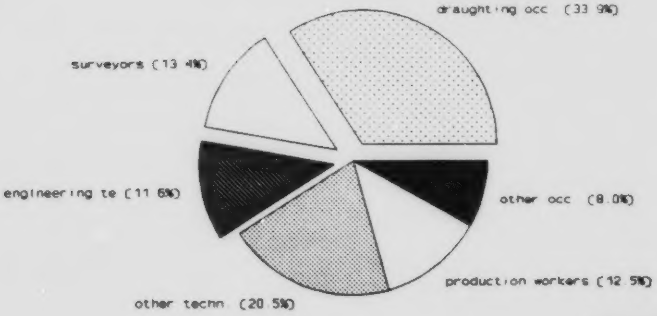
APPLIED SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 9 had not entered the labour market
a total of 91 had entered the labour market
7 were persuing further studies
2 were neither in the labour market nor at school
87 had found a job
4 were unemployed
44 had found a job directly related to their education
37 had found a job parlially related to their education
6 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	215	1.4	0.1
1985/90	185	1.3	1.0
1990/95	155	1.2	0.8
1995/2000	160	1.2	0.8

APPLIED SCIENCES

OTHER ENGINEERING TECHNOLOGIES
VOCATIONAL COLLEGE DIPLOMA

This field of studies encompasses the disciplines of mechanical drafting, cartographic and geodesic technologies, maintenance analysis, physical and purification technologies and industrial safety.

Trends and projections

The growth in the number of graduates has been comparable to that of the vocational college sector taken as a whole during the 1980s. If this trend continues, the number will reach an average of 150 to 160 over the next decade due to the expected decline in the school population at the college level.

Occupation after graduation

Graduates in this discipline had a better than average success on the labour market since, according to the Relance Survey, more than 90% of them entered the market right after graduation. The 96% placement rate for these graduates was one of the highest at the college level. According to these graduates, more than 80% of the jobs were related to their education.

Occupational profile

Because this is a diversified field of study, the jobs held by graduates in this field are also very diversified. Graduates entering this training must nonetheless expect to find work as technicians in the area of technical drawing (34%), surveying (13%) and engineering (11%) or in other physical or biological sciences (14%). Other occupations open to these graduates are related to manufacturing, those of machinists, installers and repairers of electronic equipment. As in other engineering technologies, a small proportion of these graduates were working in categories of jobs requiring little specialization.

Salary

The average salary of graduates in these disciplines was slightly higher than average at $18,000 one year after graduation.

General picture

As indicated by the high rate of employment in jobs directly related to education, the market outlook for these graduates was excellent over the past few years, particularly in the second half of the decade when requirement growth was very vigourous.

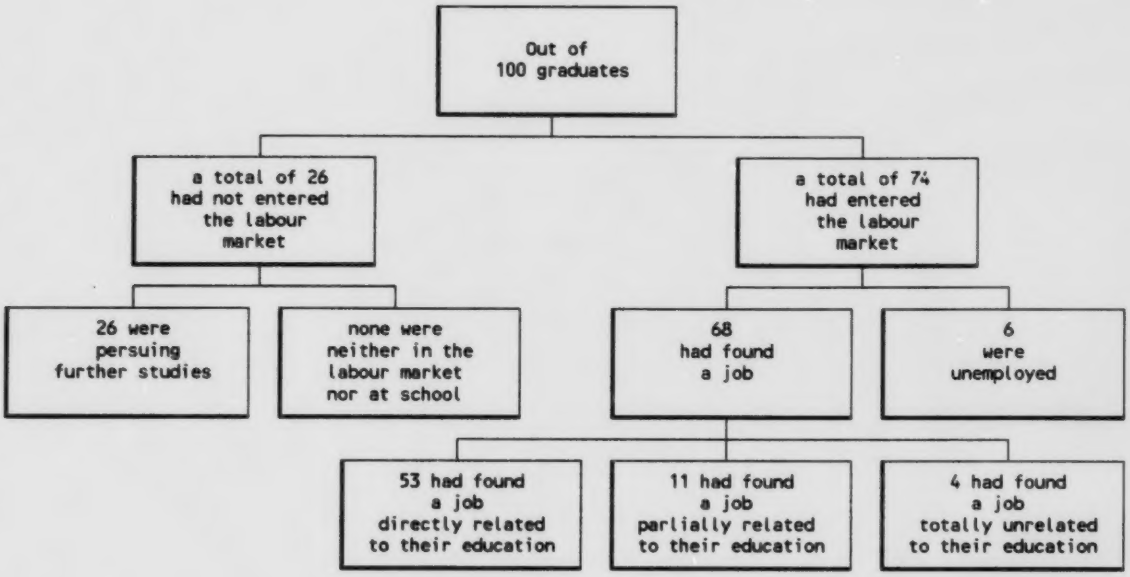
Forecasts point to a substantial drop in demand over the next few years, especially in relation to the designer groups. By minimizing the need for corrections and adjustments, computer-aided design software will continue to significantly reduce openings for draughtsmen/women. However, the demand will remain steady for more qualified concept designers. In all cases, knowledge of design software will be a job requirement for these professionals.

OTHER ENGINEERING DISCIPLINES

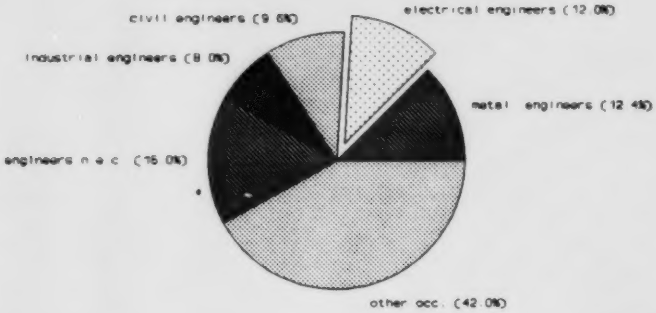
BACHELOR'S DEGREE

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 26
had not entered
the labour
market
a total of 74
had entered
the labour
market
26 were
persuing
further studies
none were
neither in the
labour market
nor at school
68
had found
a job
6
were
unemployed
53 had found
a job
directly related
to their education
11 had found
a job
parlially related
to their education
4 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	450	2.0	0.4
1985/90	515	2.1	1.0
1990/95	525	2.1	0.8
1995/2000	550	2.1	0.8

OTHER ENGINEERING DISCIPLINES
BACHELOR'S DEGREE

This field of study encompasses other engineering specialties such as aerospace, mining, industrial, metallurgical, biomedical, environmental, computer and rural engineering. Not all these programs are offered at all universities. Generally, advanced courses in mathematics, physics, chemistry and biology are prerequisites, but there may be other entrance requirements.

Trends and projections

In engineering disciplines taken as a whole, the number of graduates in "other" specialities grew slightly less quickly during the 1980s. Over the coming years, their proportion is expected to stabilize at approximately 20%, representing an average rise of 5% in the number of graduates during the 1990s.

Occupation after graduation

A higher than average percentage of these graduates were still going to school two years after obtaining their bachelor's degrees. The unemployment rate of those who had entered the labour market was lower than for graduates in other engineering specialties. Among those who had found a job, the link between work and education was closer--as it was for the other engineering disciplines--than among graduates with bachelor's degrees taken as a whole.

Occupational profile

More than 50% of graduates employed two years after graduation worked as engineers. Of these, the groups of engineer/metallurgist and engineer/electrician were the most frequently observed occupational groups. Groups in the management category also provided a significant number of openings in the short and medium term.

Salary

The average salary of survey respondents working full time two years after graduation was $31,100 annually. As in the case of engineering disciplines in general, this was appreciably above the average for graduates with bachelor's degrees.

General picture

Labour market entry opportunities over the past five years have been better than average, when compared with those open to graduates with bachelor's degrees as a whole. An average proportion said they would make the same academic choice if they had to start their education all over again.

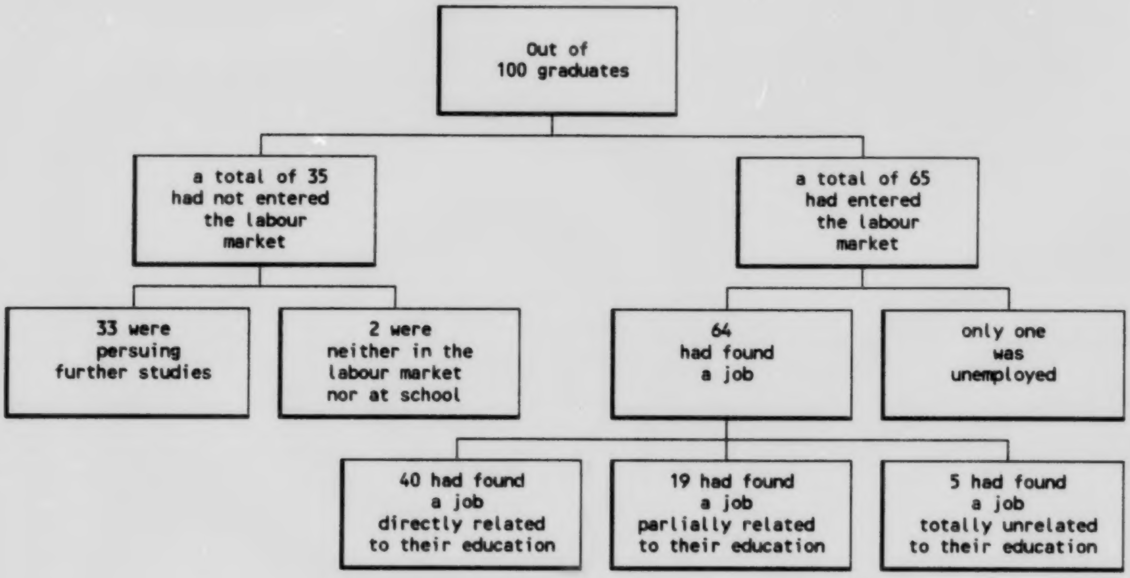
Over the coming years, labour market prospects for these graduates are expected to wane somewhat. Some specialties, however, should experience more dynamic growth. These include specialities in aeronautics, environment and computer systems, sectors with a high growth rate.

OTHER ENGINEERING DISCIPLINES

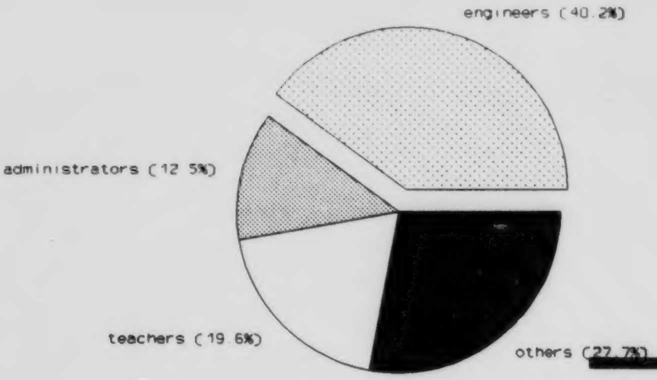
APPLIED SCIENCES

MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 35 had not entered the labour market
a total of 65 had entered the labour market
33 were persuing further studies
2 were neither in the labour market nor at school
64 had found a job
only one was unemployed
40 had found a job directly related to their education
19 had found a job parlially related to their education
5 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	200	4.8	0.5
1985/90	270	5.4	1.0
1990/95	245	5.2	0.8
1995/2000	225	5.2	1.0

OTHER ENGINEERING DISCIPLINES
MASTER'S DEGREE AND DOCTORATE

This grouping of graduate level engineering disciplines includes chemical, energy, industrial, mechanical, metallurgic, mineral, physical and rural engineering.

Trends and projections

Generally, the number of graduates in these disciplines rose from an average of 200 in the first half of the decade to an average of 270 in the second half. This rate of growth was slightly higher than that of all disciplines at the graduate level considered together. The number of graduates is expected to drop somewhat in the coming years, because of the demographic decline in the corresponding age categories, a decline that will probably not be compensated for completely by the increase in school attendance.

Graduates' labour market participation

A high percentage of these graduates were pursuing further studies two years after graduation. The unemployment rate of those who had entered the labour market was very much below average, and the education-work link was above average. According to the survey results, 60% of jobs found were directly related to studies.

Occupational profile

The occupational profile of graduates two years after finishing their studies was varied. Positions as engineers accounted for 45% of jobs, but these were spread out across all engineering specialties. The groups providing the greatest number of jobs were industrial engineers and civil engineers. The next largest group was that of teachers, in particular research and teaching assistants, who alone accounted for 10% of jobs. This high percentage is in part attributable to the fact that a great number of graduates decided to pursue further studies. Professionals in the natural and physical sciences and managers also accounted for a significant number of jobs.

Salary

The average annual salary of respondents to the 1988 survey working full time was $35,200.

General picture

In contrast to graduates in other disciplines, graduates with advanced degrees in these disciplines did not seem to have better labour market entry possibilities than graduates with bachelor's degrees. Accessibility is comparable with that of graduates with advanced degrees as a whole.

During the second half of the 1980s, the market for these graduates recovered from the 1981-82 recession. After a period of rapid growth, demand for these occupations should drop slightly, although it should remain at a level that will provide job opportunities.

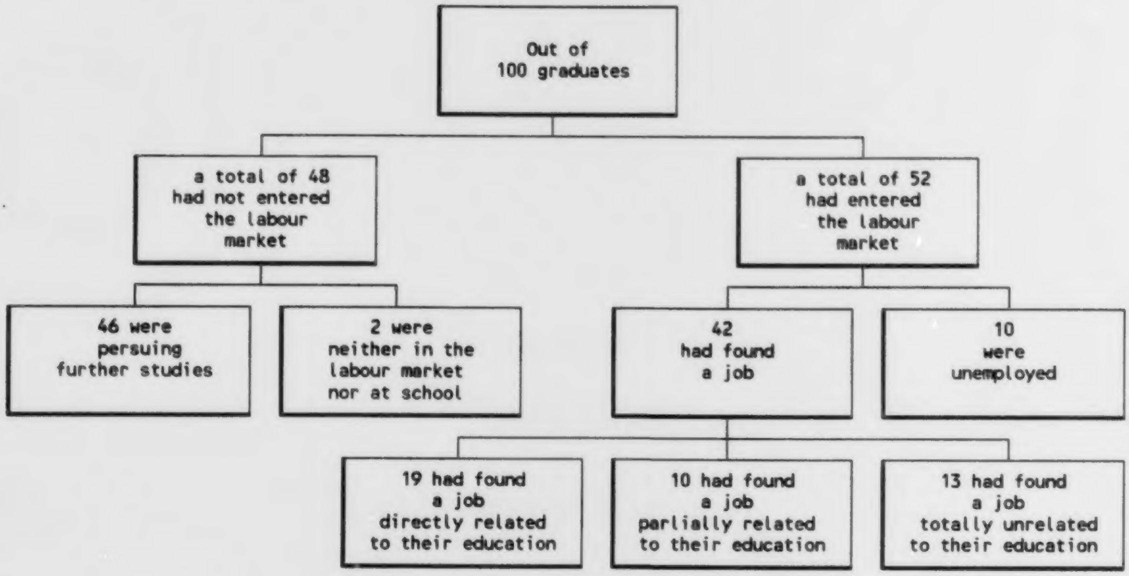
BIOLOGICAL SCIENCES

BIOLOGY

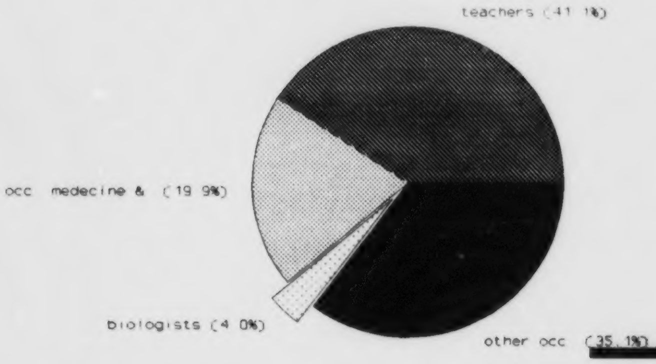
BACHELOR'S DEGREE

BIOLOGICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 48
had not entered
the labour
market
a total of 52
had entered
the labour
market
46 were
persuing
further studies
2 were
neither in the
labour market
nor at school
42
had found
a job
10
were
unemployed
19 had found
a job
directly related
to their education
10 had found
a job
parlially related
to their education
13 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	555	2.5	---
1985/90	735	3.0	---
1990/95	775	3.0	---
1995/2000	775	3.0	---

BIOLOGY
BACHELOR'S DEGREE

This field of study encompasses specialties such as genetics and microbiology but does not include, among others, botany, zoology, biophysics and medicine which are listed elsewhere. The biology program is offered in most Quebec universities. Prerequisites for admission vary according to the university but generally include courses in physics, chemistry, biology and mathematics in addition to a Diploma of Collegial Studies.

Trends and projections

After experiencing a decline in the first half of the last decade, the popularity of this discipline among young people recovered slightly starting in 1985. From more than 4% in 1977 the proportion of graduates in this sector compared to graduates with bachelor's degrees taken as a whole rose from 2.4% in 1985 to nearly 3% in 1989. It is expected that during the 1990s about 750 students annually could be trained in Quebec universities if the trends of the past few years continue.

Occupation after graduation

According to the data for 1988, only 26% of the 1986 graduates in this field of study were employed, representing a markedly smaller proportion than the average for disciplines at the bachelor's level. The lower placement rate of graduates who decided not to continue their studies as well as the small number of those who found jobs directly related to their education tend to reflect a difficult labour market. This situation largely explains the fact that a very high number of graduates decided to pursue master's level studies or studies that were complementary to their initial training.

Occupational profile

About 40% of the graduates who were active on the labour market two years after completing their studies were working in the teaching sector. In particular, secondary school teachers (30%) and university research assistants (10%) represented the most common positions held. With respect to health-related jobs, which constituted the other large occupational group, the most common were various occupations in medical technology (10%), dietetics (5%) and nursing (5%). Finally, less than 5% of these graduates were working as biologists.

Salary

The difficult labour market situation for these graduates is also reflected in the salary outlook upon graduation. The average salary of respondents to the National Graduate Survey of graduates working full time in 1988 was $21,500 annually compared to $26,600 for respondents with bachelor's degrees taken as a whole.

General picture

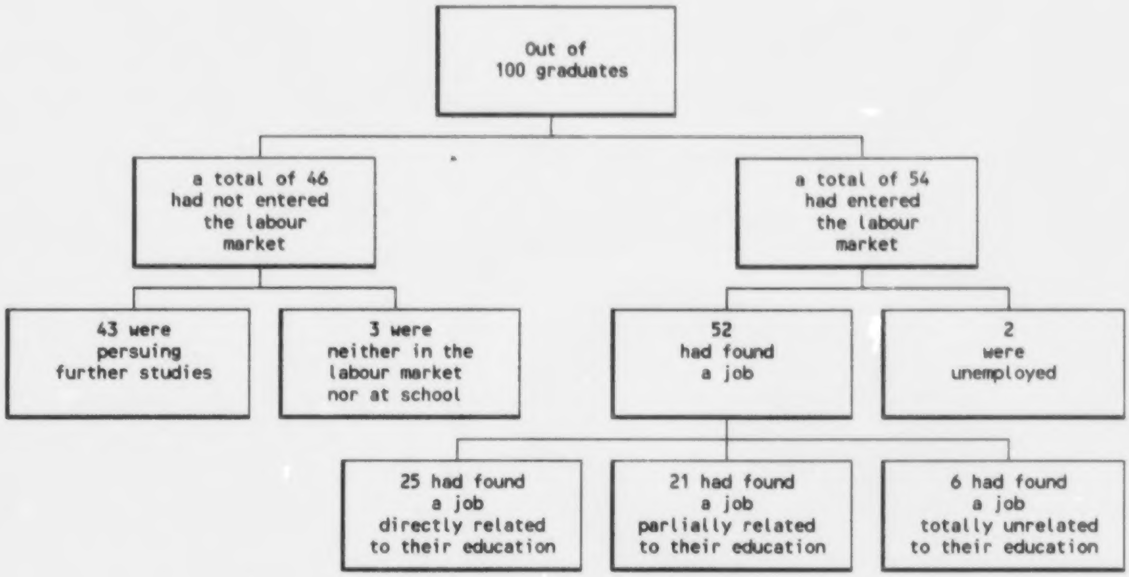
The overall labour market situation for these graduates appeared to be more difficult than that for the average of graduates with a bachelor's degree. Their placement rate was lower and job opportunities directly related to their education were fewer. This situation was reflected in the average salary which was 20% lower than the average. Finally, a smaller than average proportion indicated that they would choose the same field of studies.

In the years to come, the employment outlook for the main occupations associated with this field of study will likely continue to be difficult. On the one hand, the decrease in the secondary school population could lead to cutbacks in teaching staff at this level. On the other hand, despite dynamic growth, the biologist group will not be able to absorb the forecast number of graduates if the trends of the past few years continue.

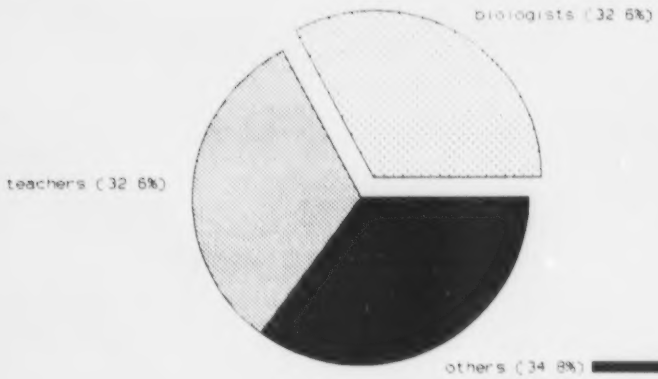
BIOLOGY
MASTER'S DEGREE AND DOCTORATE

BIOLOGICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 46 had not entered the labour market
a total of 54 had entered the labour market
43 were persuing further studies
3 were neither in the labour market nor at school
52 had found a job
2 were unemployed
25 had found a job directly related to their education
21 had found a job parlially related to their education
6 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	85	2.0	0.1
1985/90	105	2.1	1.0
1990/95	100	2.1	0.9
1995/2000	90	2.1	1.0

BIOLOGY
MASTER'S DEGREE AND DOCTORATE

Graduate programs in biology are offered by most Quebec universities. Specialized programs in cell biology, dental biology, molecular biology, microbiology and immunology are available in some universities.

Trends and projections

Rising from 80 to 110 during the 1980s, the number of graduates in this discipline grew at an average rate. In view of the anticipated drop in the number of graduate students as a whole during the coming decade, the number of degrees could drop by about 15% as the year 2000 approaches.

Graduates' labour market participation

Among those who had entered the labour market, placement was above average and the unemployment rate was barely 4% at the time of the survey. The percentage of people who said their jobs had a link with their education was slightly below average but nevertheless quite high. Like graduates with bachelor's degrees, a markedly above average proportion of these graduates were pursuing further studies two years after obtaining their degrees.

Occupational profile

Jobs as biologists were far more accessible to graduates with master's degrees or doctorates than to applicants with bachelor's degrees. While barely 5% of people with bachelor's degrees had found such a job, nearly 35% of people with graduate degrees had found one. Generally, 45% of these graduates held jobs in the natural sciences and engineering and 30% in teaching, of which two thirds were as research assistants. This reveals the importance of the university research sector in providing job opportunities for these graduates.

Salary

The average annual salary of survey respondents working full time was $28,400, lower that the average salary of $38,000 reported by respondents in all disciplines as a whole.

General picture

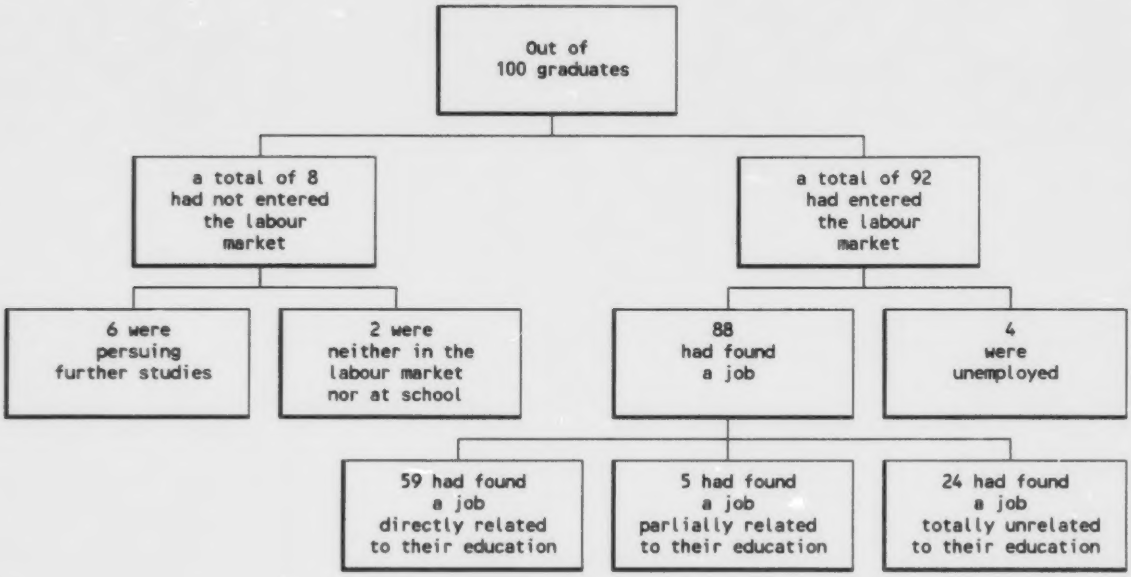
The apparent contradiction between the high placement rate of graduates who had entered the labour market and the strong general tendency to pursue further studies can be explained in large part by the fact that university research is an important means of entry to the labour market and can be easily combined with continuing one's education.

Outside the university, job opportunities seem to be more limited, since the sector providing the most employment is the public service, and it is facing tight budgetary constraint.

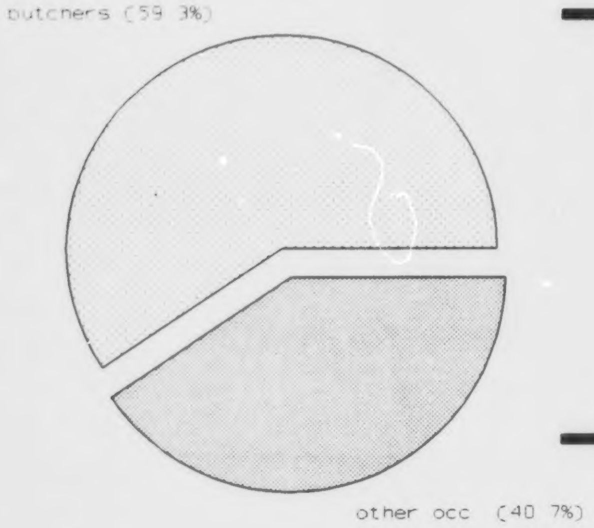
MEAT CUTTING BIOLOGICAL SCIENCES

SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 8 had not entered the labour market
a total of 92 had entered the labour market
6 were persuing further studies
2 were neither in the labour market nor at school
88 had found a job
4 were unemployed
59 had found a job directly related to their education
5 had found a job parlially related to their education
24 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	125	0.4	---
1985/90	70	0.6	1.0
1990/95	45	0.5	1.3
1995/2000	45	0.5	1.2

BIOLOGICAL SCIENCES

MEAT CUTTING
SECONDARY VOCATIONAL

This field of training is intended to help students acquire meat cutting skills.

Trends and projections

Although this field of study recorded a slight decline in enrolment, it has weathered the drop in the popularity of secondary vocational education better than other disciplines.

Occupation after graduation

A large majority of the graduates who decided to enter the labour market were employed at the time of the Relance Survey. This success encouraged many graduates to enter the labour market and may explain why very few of them decided to continue their studies. Among the employed graduates, about seven out of ten held jobs that were for the most part very closely related to their education. More than 90% of jobs were full time and only 15% were temporary.

Occupational profile

In six out of ten cases, these graduates held jobs as butchers or assistant butchers. They found jobs primarily with companies in the food retail trade and, to a lesser extent, with meat-processing companies.

Salary

The average salary of those working full time was $14,600 one year after graduation.

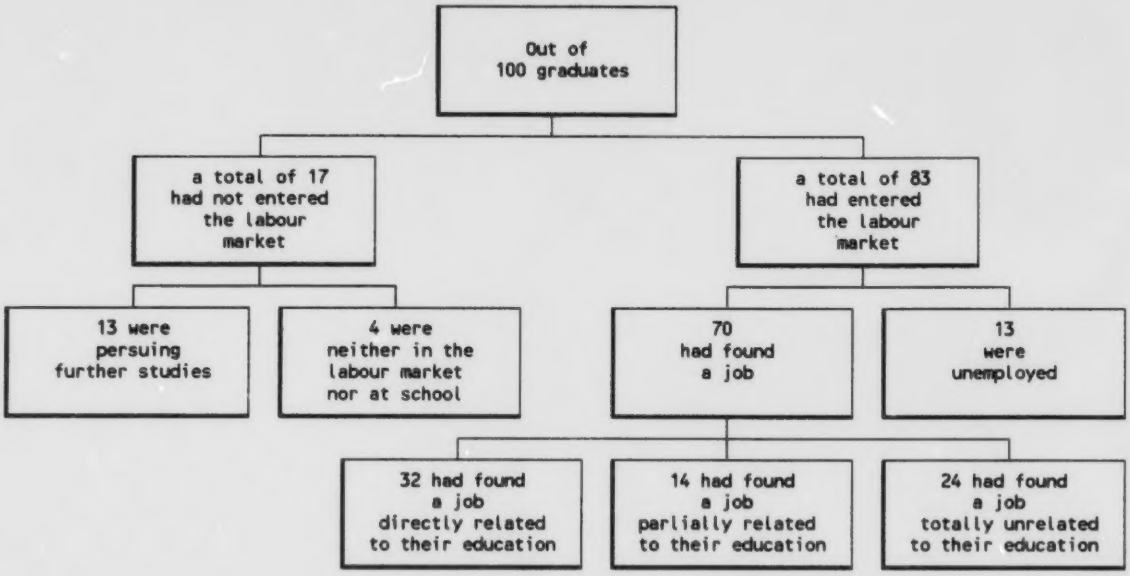
General picture

Employment opportunities for these graduates will continue to benefit from the proliferation of small stores and specialty meat counters in the larger stores. Pre-packaging greatly affects the skills required in this field, placing the emphasis on sales and customer relations skills.

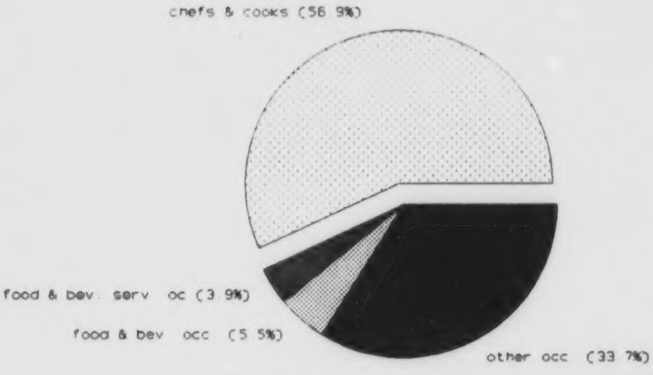
PROFESSIONAL COOKING
SECONDARY VOCATIONAL

BIOLOGICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 17 had not entered the labour market
a total of 83 had entered the labour market
13 were persuing further studies
4 were neither in the labour market nor at school
70 had found a job
13 were unemployed
32 had found a job directly related to their education
14 had found a job parlially related to their education
24 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	785	2.7	0.3
1985/90	285	2.5	1.0
1990/95	170	1.8	1.9
1995/2000	175	1.8	1.9

PROFESSIONAL COOKING
SECONDARY VOCATIONAL

This field of study trains students in the preparation of light full-course meals as well as the creation and implementation of various menus.

Trends and projections

From slightly less than 800 graduates in the early 1980s, this field of study has produced less than 300 in each of the past five years. Although the number of graduates dropped by more than half, the decline is still within the average recorded for all the secondary vocational programs over this period so that graduates in the cooking program continue to account for a large share of 2.5% of all the graduates at this level.

Occupation after graduation

The 1987 graduates faced a relatively more favourable labour market than the other secondary vocational graduates taken as a whole. Seven out of ten graduates succeeded in finding a job which, in two cases out of three, was directly or partially related to their training. Moreover, 85% of the jobs were full time and more than 90% were permanent. The proportion of unemployed graduates was a little more than 16%.

Occupational profile

An exceptionally high proportion of the jobs were concentrated in the occupational group of chefs and cooks. From the industrial standpoint, more than 60% of those employed were working within the accommodation-lodging sector and a smaller proportion (14%) were working in the retail trade.

Salary

At an average of $10,800, the salaries earned by these graduates in 1988 were very low.

General picture

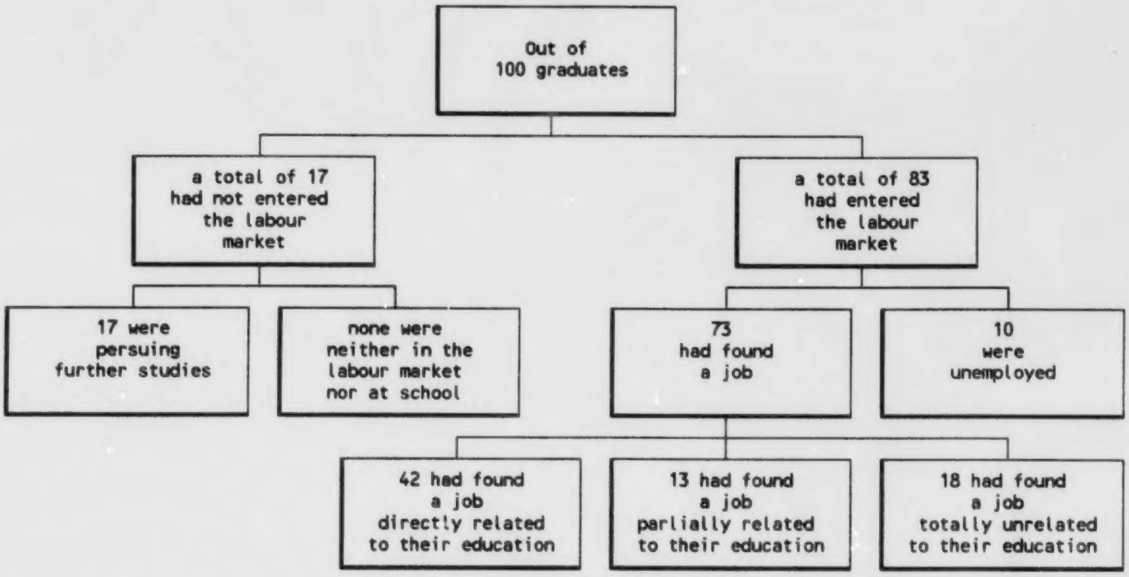
The placement opportunities in related occupations compare positively to those in other disciplines at the secondary level. Among the factors that help to explain this good performance should be mentioned the rapid expansion of the restaurant industry, especially family-type restaurants, and the high turnover rate which makes it easier for these graduates to enter the labour market.

The factors which have maintained the growth of the restaurant sector over the past decade, i.e. higher salaries, two-income families and changes in eating habits should continue to have a positive effect on the industry in the coming years. In this respect, the employment outlook should remain one of the brightest throughout the 1990s.

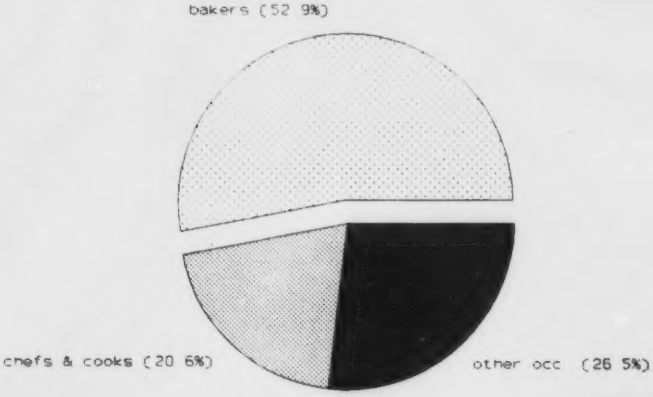
PASTRY
SECONDARY VOCATIONAL

BIOLOGICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 17 had not entered the labour market
a total of 83 had entered the labour market
17 were persuing further studies
none were neither in the labour market nor at school
73 had found a job
10 were unemployed
42 had found a job directly related to their education
13 had found a job parlially related to their education
18 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	90	0.3	0.4
1985/90	50	0.5	1.0
1990/95	35	0.4	1.7
1995/2000	35	0.4	1.7

PASTRY
SECONDARY VOCATIONAL

This field of training covers the preparation of pastry products, fillings and creams, confectionery and bread as well as the daily management of related activities.

Trends and projections

Unlike the severe drop in the overall enrolment in the secondary vocational sector, enrolment in this field of study remained somewhat more steady over the 1980s.

Occupation after graduation

An above-average proportion of graduates decided to continue their studies. The placement rate for graduates who entered the labour market was 90% one year after graduation, representing an above-average level. Those who had found jobs were generally working full time in jobs that were more regularly related to education than their colleagues in other disciplines.

Occupational profile

The occupational groups of bakers and cooks dominated the occupational profile of these graduates, with 50% and 20% of the jobs obtained. The main sectors providing employment were the accommodation-restaurant, retail trade (small bakeries and pastry shops) and food sectors, with 45%, 30% and 10% of the jobs respectively.

General picture

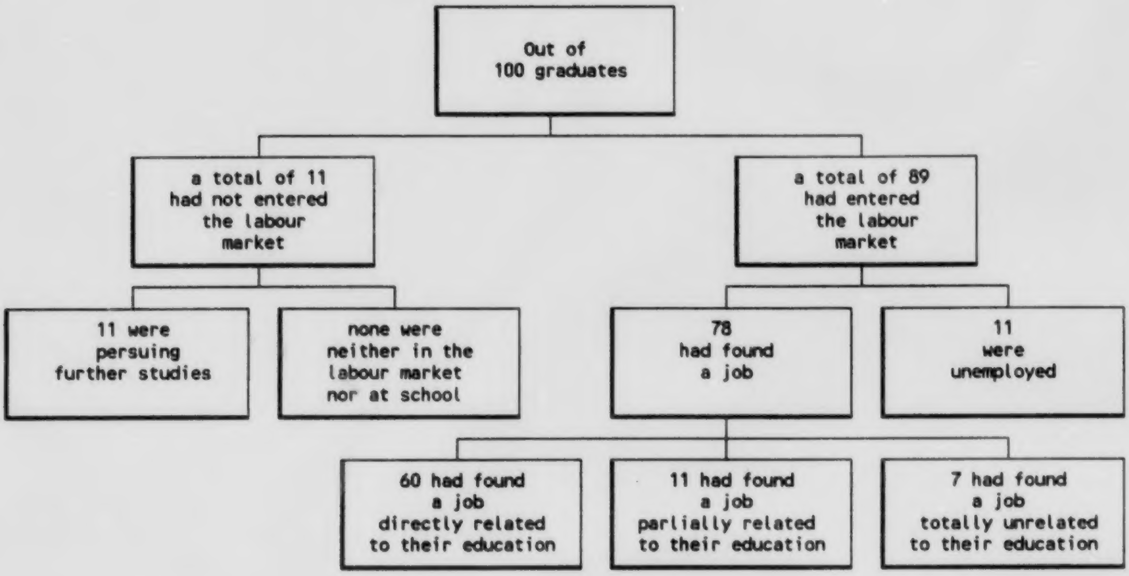
The employment outlook for these graduates appears to be slightly brighter than that for graduates in other disciplines at the secondary level. Given the anticipated growth in the labour demand in related occupations, job opportunities over the next few years should remain as good.

HOUSEHOLD SCIENCE

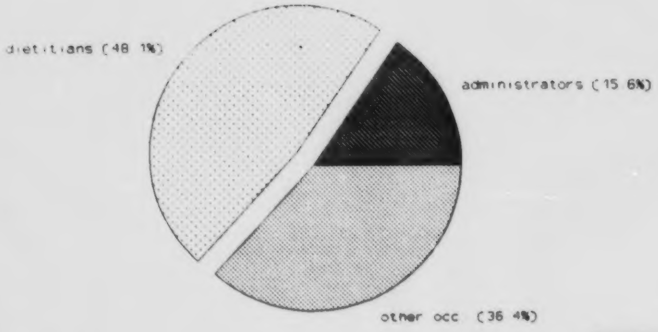
BACHELOR'S DEGREE

BIOLOGICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 11 had not entered the labour market
a total of 89 had entered the labour market
11 were persuing further studies
none were neither in the labour market nor at school
78 had found a job
11 were unemployed
60 had found a job directly related to their education
11 had found a job parlially related to their education
7 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	105	0.5	1.9
1985/90	155	0.6	1.0
1990/95	150	0.6	0.7
1995/2000	175	0.7	0.8

BIOLOGICAL SCIENCES

HOUSEHOLD SCIENCE
BACHELOR'S DEGREE

This group of fields of study includes food, consumption, family, dietetic and other household sciences, except interior decoration. Laval and Montréal offer bachelor's programs in dietetics. McGill offers a major in dietetics and food sciences. Advanced college courses in differential and integral mathematics, physics, chemistry and biology are prerequisites.

Trends and projections

The number of graduates in this discipline grew at a rate comparable to the average for graduates with bachelor's degrees taken as a whole between 1980 and 1990. If this trend continues over the next few years, one can expect an average of some 170 graduates annually during the coming decade.

Occupation after graduation

According to the 1988 survey of graduates, the labour market participation rate of these graduates greatly exceeded the average for other graduates with bachelor's degrees. The placement rate in jobs related to education was also higher than average, although the unemployment rate was somewhat unfavourable. These different indicators, along with a higher incidence of part-time work, indicate that labour market entry for these graduates may depend on accepting work on a contract basis, and this means greater likelihood of periods of temporary unemployment.

Occupational profile

With nearly 50% of jobs, the group of dieticians is by far the one that offers the most direct labour market entry possibilities. Various other education-related jobs are open to these graduates, including production managers, food preparation supervisors and food controllers in the food and beverage sectors. Taken together, these categories account for nearly 25% of jobs held by these graduates two years after graduation.

Salary

Despite relatively favourable labour market entry conditions, salaries ($23,400 annually on average) reported by respondents to the 1988 survey who were working full time were 10% below the average for graduates with bachelor's degrees.

General picture

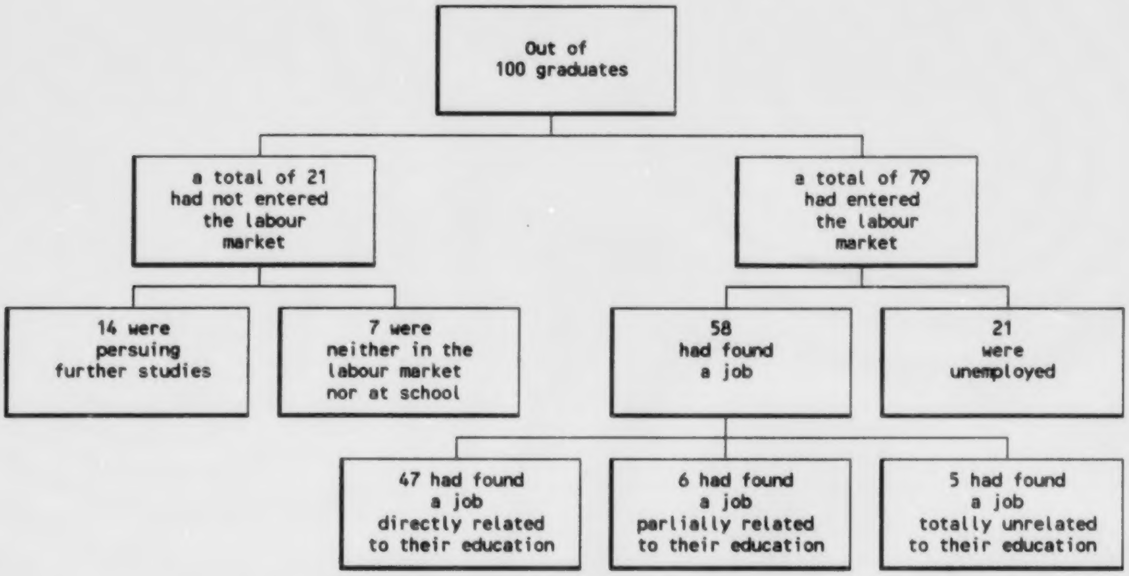
The labour market conditions described by the indicators presented above are generally better than average. However, trends in education-related occupations indicate that they are declining in relation to requirements in the previous period.

Over the coming years, this trend is likely to continue, as the growth rate of requirements for this kind of human resource continues to drop. Nevertheless, labour market entry possibilities are expected to remain in the range of the average for graduates with bachelor's degrees taken as a whole.

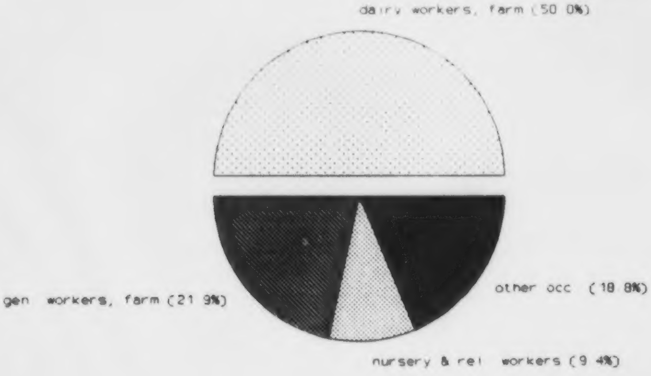
AGRICULTURE BIOLOGICAL SCIENCES

SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 21 had not entered the labour market
a total of 79 had entered the labour market
14 were persuing further studies
7 were neither in the labour market nor at school
58 had found a job
21 were unemployed
47 had found a job directly related to their education
6 had found a job parlially related to their education
5 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	335	1.1	0.3
1985/90	100	0.8	1.0
1990/95	40	0.4	3.0
1995/2000	40	0.4	2.1

BIOLOGICAL SCIENCES

AGRICULTURE
SECONDARY VOCATIONAL

This field of study includes various specialties related to horticulture and animal, vegetable, and dairy production.

Trends and projections

From an average of more than 300 graduates annually during the first half of the 1980s, the popularity of this field of study dropped dramatically to fewer than 100 graduates each year in the second half of the decade.

Occupation after graduation

Of the 57 graduates surveyed, only 33 were employed one year after graduation, representing an employment rate of 58%, which was lower than the 67% recorded for secondary vocational graduates taken as a whole. Nonetheless, most of the graduates held jobs directly related to their field of study (26) but a sizable proportion, nearly one-third, held temporary jobs.

Occupational profile

The occupation of dairy farm worker provides by far the most job opportunities since it accounts for nearly one-half of the employed graduates. The occupation of farm worker is second, providing jobs for five workers. Given the occupational distribution of these workers, it is not surprising that most of them work on a farm.

General picture

Despite a lower overall placement rate than the average for the secondary vocational sector, a larger proportion of graduates in this discipline held jobs related to their education. The employment outlook improved considerably during the second half of the 1980s owing to greater demand and the shrinking number of graduates. In fact, over the past few years increased demand for farm workers has tended to reflect the growth in the average size of farms.

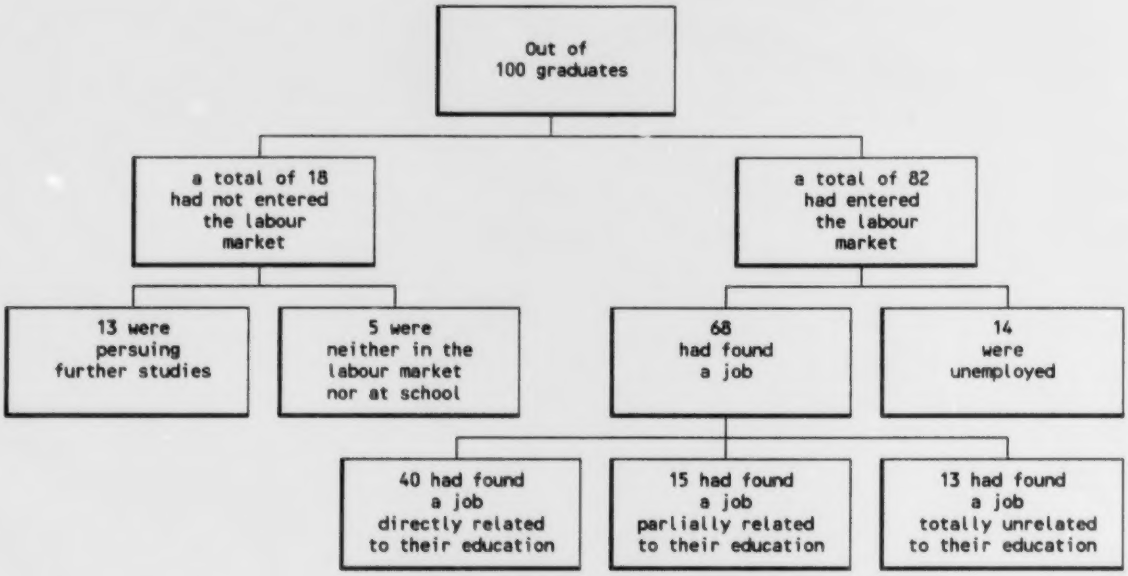
The requirement growth estimated for the 1990s indicates that the employment outlook will be quite similar to that of recent years. These graduates tend to face competition on the labour market from their older colleagues in agricultural technology and agricultural management technology at the college level who are also searching for a first job in the field.

AGRICULTURAL TECHNOLOGIES

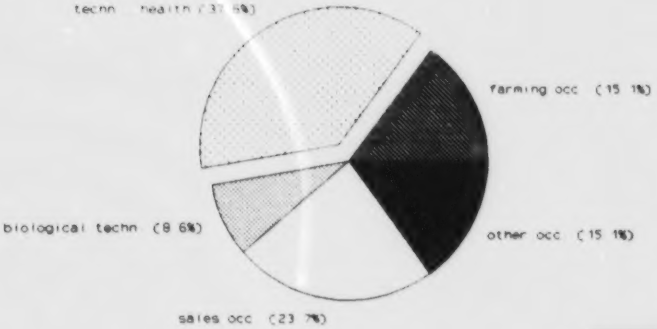
BIOLOGICAL SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of
100 graduates
a total of 18
had not entered
the labour
market
a total of 82
had entered
the labour
market
13 were
persuing
further studies
5 were
neither in the
labour market
nor at school
68
had found
a job
14
were
unemployed
40 had found
a job
directly related
to their education
15 had found
a job
parlially related
to their education
13 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	335	2.3	0.8
1985/90	295	2.1	1.0
1990/95	275	2.2	1.1
1995/2000	285	2.2	1.2

BIOLOGICAL SCIENCES

AGRICULTURAL TECHNOLOGIES

VOCATIONAL COLLEGE DIPLOMA

This group of disciplines encompasses specialties in animal health, animal husbandry, horticulture, horse technology and soil technology. The disciplines related to horticulture are offered primarily at the Institut de technologie agro-alimentaire de St-Hyacinthe and those related to animal husbandry at the Institut de La Pocatière. Animal health specialties (veterinary medicine and animal health technologies) are available in a larger number of institutions in the Lower St. Lawrence, Estrie, Laval-Laurentides- Lanaudière, Mauricie-Bois-Francs and Montreal regions.

Trends and projections

Throughout the 1980s, these disciplines accounted for approximately 2% of the graduates in the college-level technologies taken as a whole. If this trend continues over the 1990s, between 275 and 285 students will graduate each year.

Occupation after graduation

A proportion of graduates similar to the average had entered the labour force after completing their studies. The placement rate for these graduates was 83%, a lower level the 90% average for the vocational college graduates taken as a whole. According to those who found employment, more than 80% of the jobs were related to their education. Part-time work accounted for 10% of the jobs obtained and temporary jobs for 20%.

Occupational profile

The groups of veterinary assistants and veterinary laboratory technicians which accounted for 25% and 7%, respectively, of the jobs dominated the occupational profile of these graduates. Occupations related to farm operation provided jobs for 13% of graduates. The jobs of biology technicians and salespersons in pet stores also provided openings for these graduates.

Salary

The average annual salary of respondents to the Relance Survey who were working full time was $16,100, a slightly lower level than the $17,700 earned on average by vocational college graduates.

General picture

Despite an overall lower than average placement rate, employment opportunities in related occupations were comparable to the average for the disciplines. Graduates specializing in animal care appeared to enjoy a more favourable labour market than graduates in agricultural technologies.

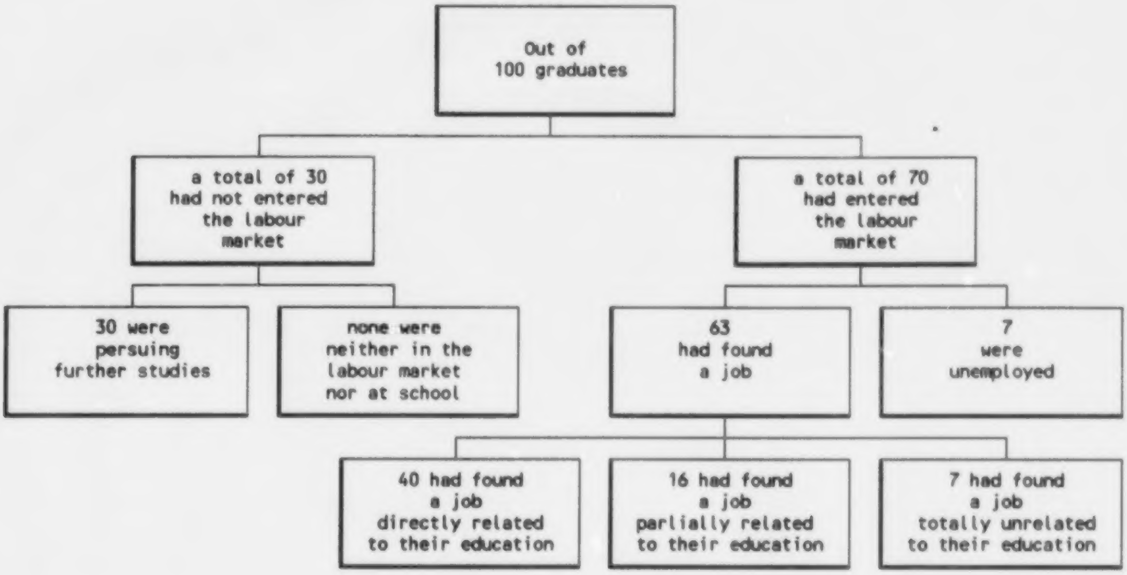
Due to the expected drop in the number of graduates and the continued growth of employment in related occupations, graduates in this discipline could benefit from improved job opportunities. Once again, graduates specializing in animal health will have an advantage.

ANIMAL SCIENCE AND PLANT SCIENCE

BIOLOGICAL SCIENCES

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation



Out of 100 graduates

a total of 30 had not entered the labour market

a total of 70 had entered the labour market

30 were persuing further studies

none were neither in the labour market nor at school

63 had found a job

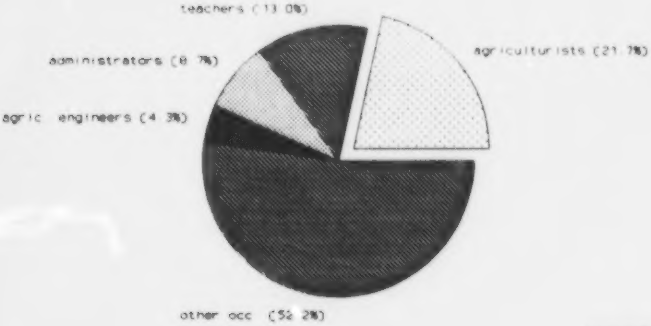
7 were unemployed

40 had found a job directly related to their education

16 had found a job partially related to their education

7 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	410	1.9	1.8
1985/90	550	2.2	1.0
1990/95	600	2.3	1.6
1995/2000	600	2.3	1.4

BIOLOGICAL SCIENCES

ANIMAL SCIENCE AND PLANT SCIENCE

BACHELOR'S DEGREE

This field of study comprises zoology, zootechnics, soil science, agriculture, botany, biochemistry, biophysics and other biological sciences. Given the diversity of these disciplines, the reader is referred to the university calendars for prerequisites and programs offered by the different universities.

Trends and projections

The number of graduates in these disciplines grew at a rate slightly higher than the average during the 1980s. If current trends continue throughout the 1990s, an average of nearly 600 students will graduate in one or another of these specialties each year.

Occupation after graduation

Two years after obtaining their degrees, 1986 graduates in this sector showed a labour market participation rate lower than the average for graduates in other disciplines. Proportionately, more of them had decided to pursue further studies. Among those who had decided to enter the labour market right away, unemployment was higher and jobs at least partially related to education were fewer.

Occupational profile

The occupational profile of graduates employed two years after graduation was dominated by the groups of occupations in the natural sciences (43%). Of these, agronomists accounted for the greatest number of jobs, with approximately 30% of positions.

Salary

The average annual salary of the 1988 survey respondents working full time was $20,000. This was well below the average for graduates with bachelor's degrees taken as a whole, which was $26,600 annually.

General picture

The situation of these graduates in the labour market seems to have deteriorated somewhat during the second half of the 1980s, as a result of slower growth in requirements. The low placement rates reported and lower than average salaries seem to confirm these difficulties. This probably explains in large measure why a higher proportion of these graduates decided to continue their studies and why only a small percentage considered their initial choice to be a good one.

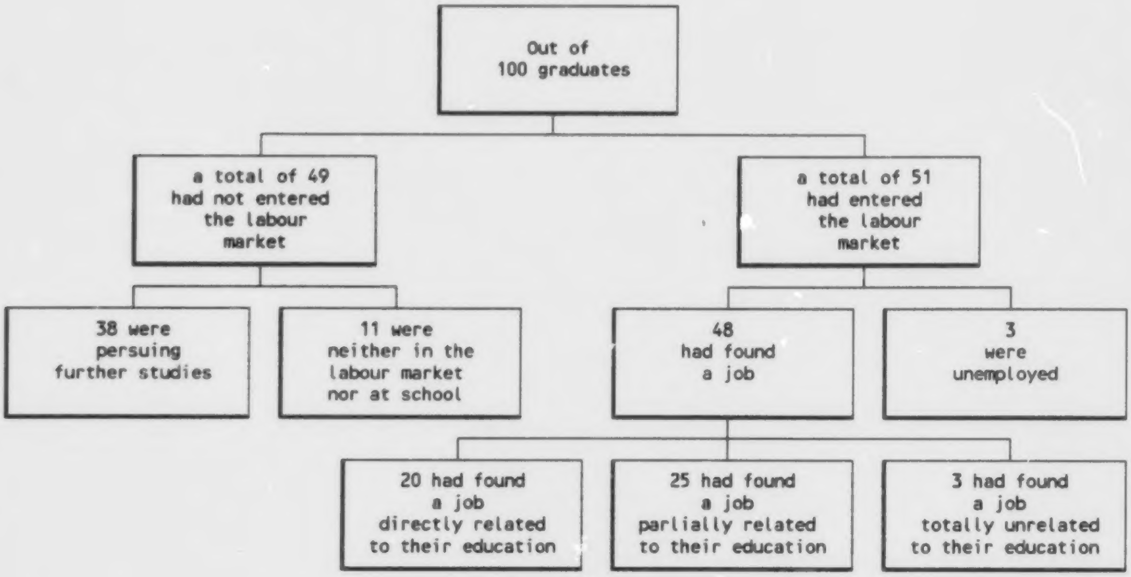
Employment opportunities in related occupations are expected to rise, and the labour market situation of these graduates should improve somewhat during the 1990s. All the same, they can expect to be confronted with a labour market more encumbered than the average.

ANIMAL SCIENCE AND PLANT SCIENCE

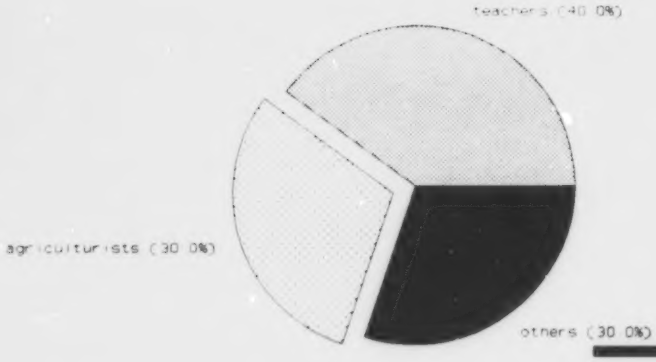
BIOLOGICAL SCIENCES

MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 49 had not entered the labour market
a total of 51 had entered the labour market
38 were persuing further studies
11 were neither in the labour market nor at school
48 had found a job
3 were unemployed
20 had found a job directly related to their education
25 had found a job parlially related to their education
3 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	65	1.5	3.7
1985/90	90	1.8	1.0
1990/95	85	1.8	1.2
1995/2000	80	1.8	1.2

BIOLOGICAL SCIENCES

ANIMAL SCIENCE AND PLANT SCIENCE

MASTER'S DEGREE AND DOCTORATE

Most of the programs in this field of study are offered at Laval University in food science and technology, soil science, agricultural microbiology, wood science and forestry. McGill University offers a program in plant sciences and one in renewable resources.

Trends and projections

The number of graduates in these disciplines grew more quickly than the average during the past decade, from 50 in 1980 to 90 in 1989. If this proportion remains the same, there should be an average of 90 graduates annually during the 1990s.

Graduates' labour market participation

According to Statistics Canada's survey of graduates, only 50% of 1986 graduates had entered the labour market after graduation. A high percentage had decided to pursue further studies. Of those who had entered the labour market, the placement rate was average for graduates with master's degrees or doctorates, and the jobs obtained were quite closely related to education.

Occupational profile

Nearly 40% of employed graduates held positions as agronomists or biologists, compared with 20% for graduates with bachelor's degrees. Approximately 40% held teaching positions, of which nearly a half were positions as research assistants at universities. Besides the educational sector, the public and parapublic sectors provided most job opportunities.

Salary

The average annual salary of survey respondents working full time was $30,800. This was 20% below the average.

General picture

The fact that both labour market participation rate and salaries were below average indicates that these graduates have a more difficult time than the average graduate entering the labour market. Accessibility to university research assistant jobs explains why a high percentage pursue further studies. At the same time, such jobs are an important means of entry into the labour market.

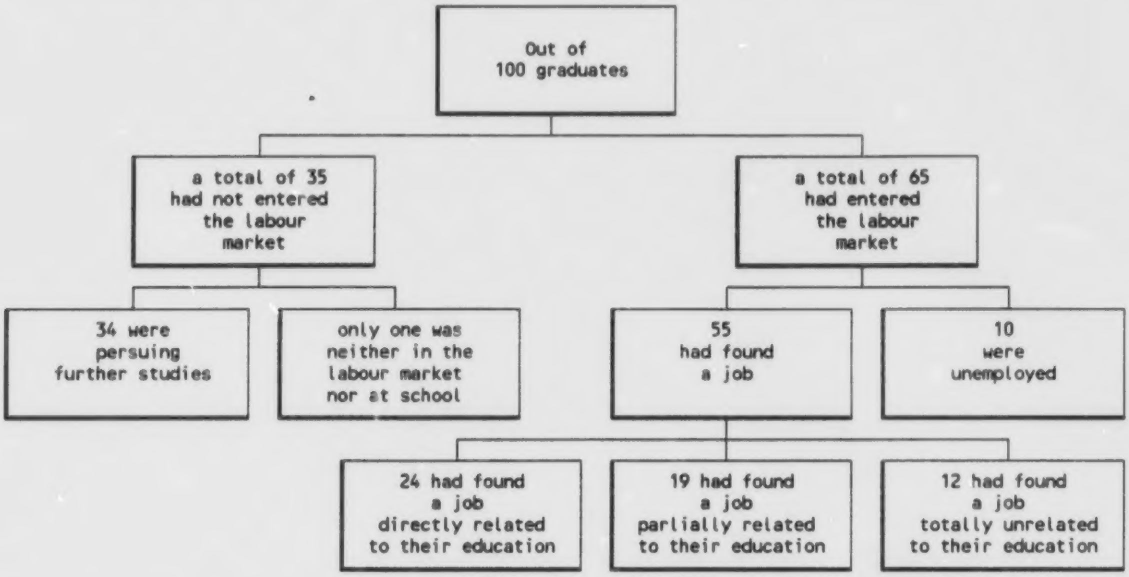
The 1980s saw a significant drop in the demand for the most directly related occupations. Although this trend should slow down in the coming years, graduates in these disciplines can expect to face a labour market offering fewer job opportunities than the average.

ENVIRONMENTAL AND CONSERVATION TECHNOLOGIES

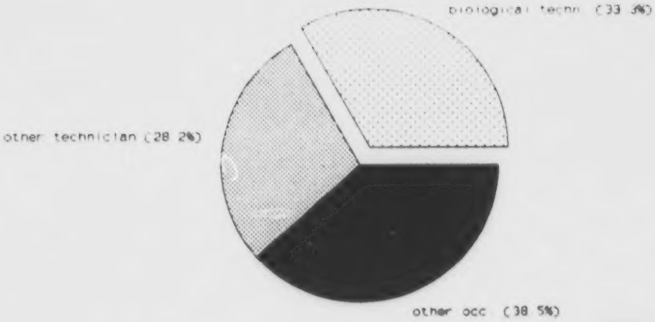
VOCATIONAL COLLEGE DIPLOMA

BIOLOGICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 35 had not entered the labour market
a total of 65 had entered the labour market
34 were persuing further studies
only one was neither in the labour market nor at school
55 had found a job
10 were unemployed
24 had found a job directly related to their education
19 had found a job parlially related to their education
12 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	165	1.1	0.7
1985/90	150	1.0	1.0
1990/95	120	1.0	1.8
1995/2000	125	1.0	1.6

BIOLOGICAL SCIENCES

ENVIRONMENTAL AND CONSERVATION TECHNOLOGIES
VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses training in wildlife management, land management, area studies and water purification.

Trends and projections

The number of graduates in these disciplines has increased at approximately the same rate as that of the college sector as a whole, maintaining its popularity at about 1% of all graduates. Given the rising interest in environmental problems, it is possible that disciplines related to purification will grow in popularity over the coming years.

Occupation after graduation

A very high proportion of these graduates choose to continue their studies at a higher level. About 34% of them did, in fact, decide to pursue this path compared to an average of 16% in the vocational sector. Placement for graduates who had entered the labour force immediately after graduation was slightly lower than the average, resulting in an unemployment rate of 12% one year after graduation. The link between eduction and work was quite comparable to the average but nearly half of the jobs were temporary.

Occupational profile

More than half the jobs held by these graduates one year after graduation were in the category of technicians, 35% of which were related to biological sciences. The occupation of medical laboratory technician also provided these graduates with interesting employment opportunities. Finally, occupations in the field of horticulture could also provide a means of entry into the market.

Salary

The average annual salary of $16,400 earned by graduates who were working full time was somewhat lower than the average for the vocational college sector as a whole.

General picture

Given the lower than average placement rate in related occupations, the high proportion of temporary jobs and the lower average salary, employment opportunities for these graduates appeared to be under stronger competition than in other disciplines. In this respect, it is not surprising to note that a large proportion of these graduates decided to continue their studies. Despite a certain amount of competition from graduates with bachelor's degrees for the jobs of biology technicians, college-level training nevertheless appeared to be more oriented towards the labour market since both the placement rate and the relation between education and work were higher. Like college graduates, a large number of university graduates with bachelor's degrees in biology were pursuing more advanced studies.

The growing importance of environmental issues in all spheres of activity should result in an increase in the requirement for professionals working in this sector. For graduates in more traditional disciplines, the market outlook over the next few years should remain similar to that of the past few years.

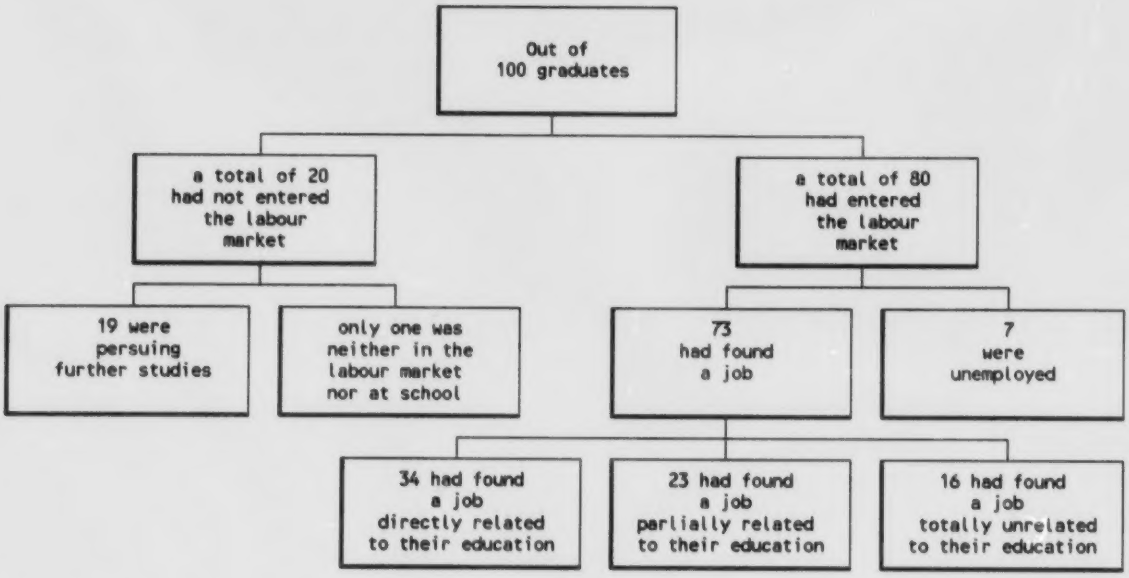
PHYSICAL SCIENCES

CHEMICAL TECHNOLOGIES

PHYSICAL SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation



Out of 100 graduates

a total of 20 had not entered the labour market

a total of 80 had entered the labour market

19 were persuing further studies

only one was neither in the labour market nor at school

73 had found a job

7 were unemployed

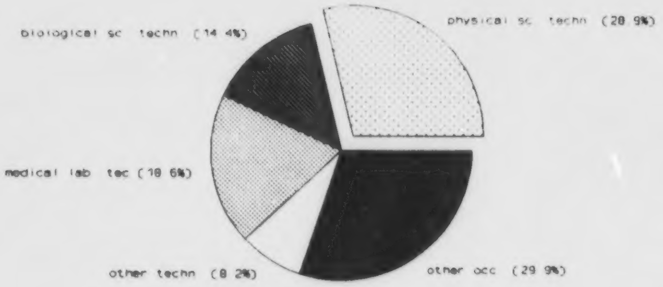
34 had found a job directly related to their education

23 had found a job parlially related to their education

16 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	190	1.3	0.9
1985/90	195	1.4	1.0
1990/95	170	1.4	0.9
1995/2000	180	1.4	1.0

CHEMICAL TECHNOLOGIES

VOCATIONAL COLLEGE DIPLOMA

This field of training includes a number of technologies, such as industrial chemical technology, analytic chemistry, chemical engineering and biochemical and plastics technology. These technologies are offered in the following regions: Lower St. Lawrence, Mauricie-Bois-Francs, Montérégie, Montreal, Outaouais and Saguenay-Lac St-Jean.

Trends and projections

The number of graduates in these disciplines has grown at approximately the same rate as that of the vocational college sector taken as a whole. If this trend continues over the next decade, 190 students will graduate each year.

Occupation after graduation

Compared to university graduates with bachelor's degrees in chemistry, those at the college level entered the labour force in larger numbers immediately after graduation. The placement rate for this group was clearly higher and the jobs were directly related to education. A very large majority of the jobs obtained were full time and permanent.

Occupational profile

Two occupational categories dominated the profile of entry-level jobs. The occupations of natural and physical science workers accounted for 52% of the jobs obtained. Of these, physical science technicians (laboratory and biochemical technicians, etc.) and biology technicians accounted for 30% and 15% of these jobs respectively. Health science technicians, primarily medical laboratory technicians, made up the second category, with 23% of the jobs obtained. The occupational groups of inspectors and foremen/women, although not as high in number, also provided possible means of entry into the labour market. More than 50% of employed graduates were working in a company in the manufacturing sector.

Salary

The average salary of respondents to the 1988 Relance Survey who were employed full time one year after graduation was $19,800 annually.

General picture

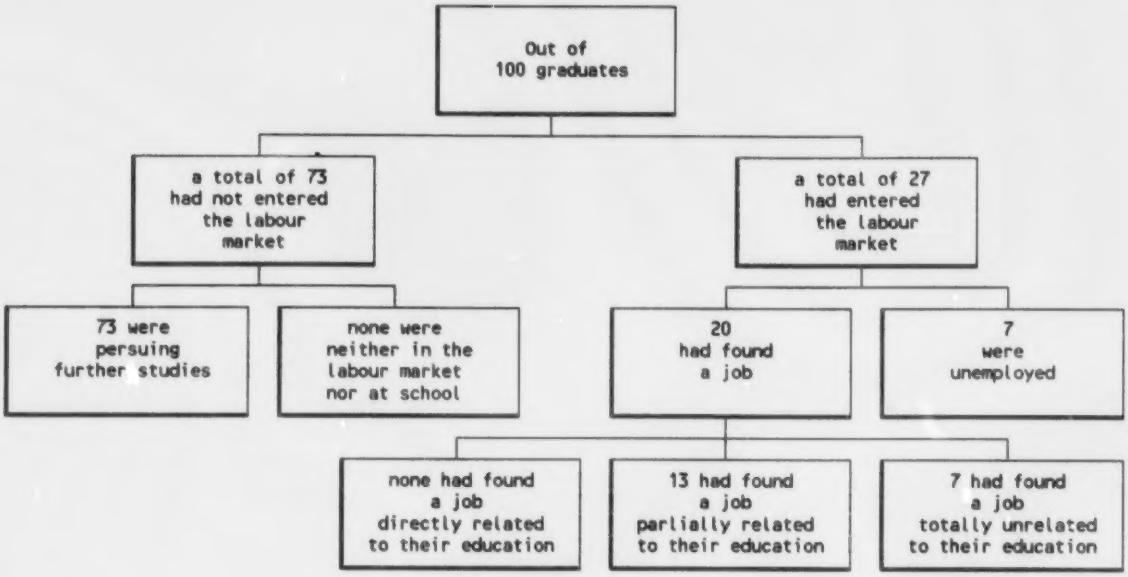
Although slightly lower than the average of college disciplines, the employment outlook for these graduates was more positive than that of their older colleagues with bachelor's degrees. A certain amount of competition therefore exists for some positions.

Over the next few years, the slower employment growth in the manufacturing sector will cause the demand for this personnel to increase at a lower than average rate. These graduates should therefore continue to face stiffer competition on the labour market.

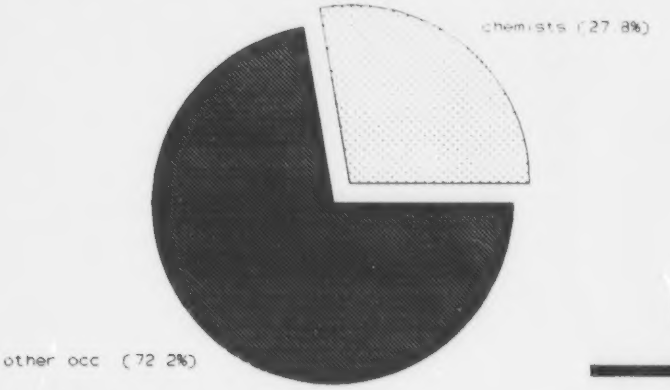
CHEMISTRY
BACHELOR'S DEGREE

PHYSICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 73 had not entered the labour market
a total of 27 had entered the labour market
73 were persuing further studies
none were neither in the labour market nor at school
20 had found a job
7 were unemployed
none had found a job directly related to their education
13 had found a job parlially related to their education
7 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	170	0.8	1.2
1985/90	240	1.0	1.0
1990/95	250	1.0	0.5
1995/2000	250	1.0	0.6

CHEMISTRY
BACHELOR'S DEGREE

All disciplines in chemistry, except for geochemistry and biochemistry, are represented in this group. Most Quebec universities offer programs in this field of study. The prerequisites are college level mathematics, physics, chemistry and biology.

Trends and projections

Following a slight drop in popularity in the early 1980s, the relative importance of this field of study in terms of number of graduates returned to the level of the late 1970s. During the 1990s, the proportion is expected to remain at its present level, for an average of 250 graduates annually.

Occupation after graduation

This discipline is intended mainly as a preparation for further studies. According to the survey of graduates, 73% were pursuing their education two years after obtaining their bachelor's degree. Graduates who entered the labour market immediately had one of the highest unemployment rates and a weak link between education and work.

Occupational profile

The occupation profile of these graduates was very diverse. Less than 30% had obtained a job as a chemist.

General picture

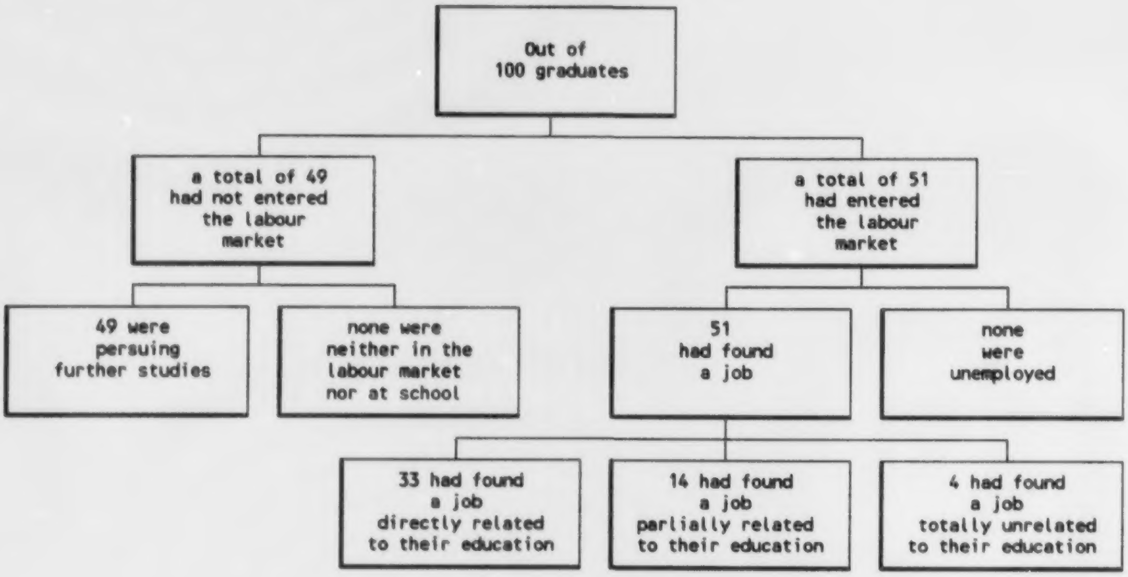
Graduates in this discipline usually have to continue their education to the master's or doctoral level before entering the labour market. For those who do not pursue their studies, labour market prospects are very much below the average for graduates with bachelor's degrees in other disciplines.

CHEMISTRY

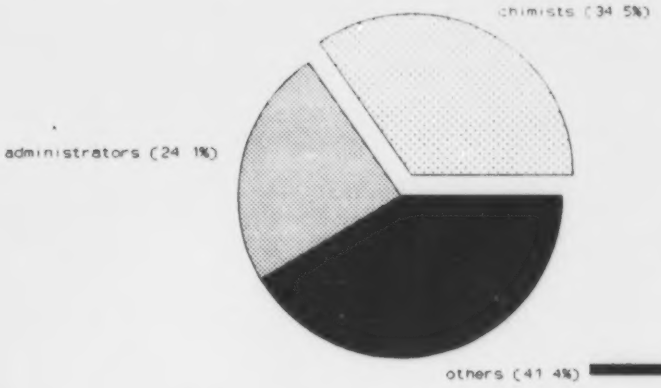
MASTER'S DEGREE AND DOCTORATE

PHYSICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 49 had not entered the labour market
a total of 51 had entered the labour market
49 were persuing further studies
none were neither in the labour market nor at school
51 had found a job
none were unemployed
33 had found a job directly related to their education
14 had found a job parlially related to their education
4 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	70	1.7	2.2
1985/90	80	1.6	1.0
1990/95	80	1.7	0.7
1995/2000	70	1.7	0.9

PHYSICAL SCIENCES

CHEMISTRY
MASTER'S DEGREE AND DOCTORATE

Most Quebec universities offer graduate programs in chemistry. Note that biochemistry has been classified under agricultural sciences and geochemistry under geology.

Trends and projections

During the 1980s, the number of graduates in this discipline grew at an average rate, rising from 70 to 80. If the current proportion is maintained, the number of graduates should drop slightly over the coming years to reach its 1980 level at the end of the decade.

Graduates' labour market participation

As in the case of bachelor's degrees, an above average percentage of graduates had decided to pursue their education two years after graduation. Their employment situation was favourable, however: all respondents who had entered the labour market had found a job. The link between employment and education was comparable with that of jobs held by other graduates with master's degrees or doctorates.

Occupational profile

The group of chemists accounted for more than 30% of jobs held two years after graduation. Other occupational groups in the natural and physical sciences accounted for nearly 15% of jobs. As in the case of other graduates with advanced degrees, positions as research and teaching assistants in universities provided job opportunities for graduates, with nearly 20% of jobs.

Salary

The average annual salary ($31,000) of respondents working full time was slightly below average.

General picture

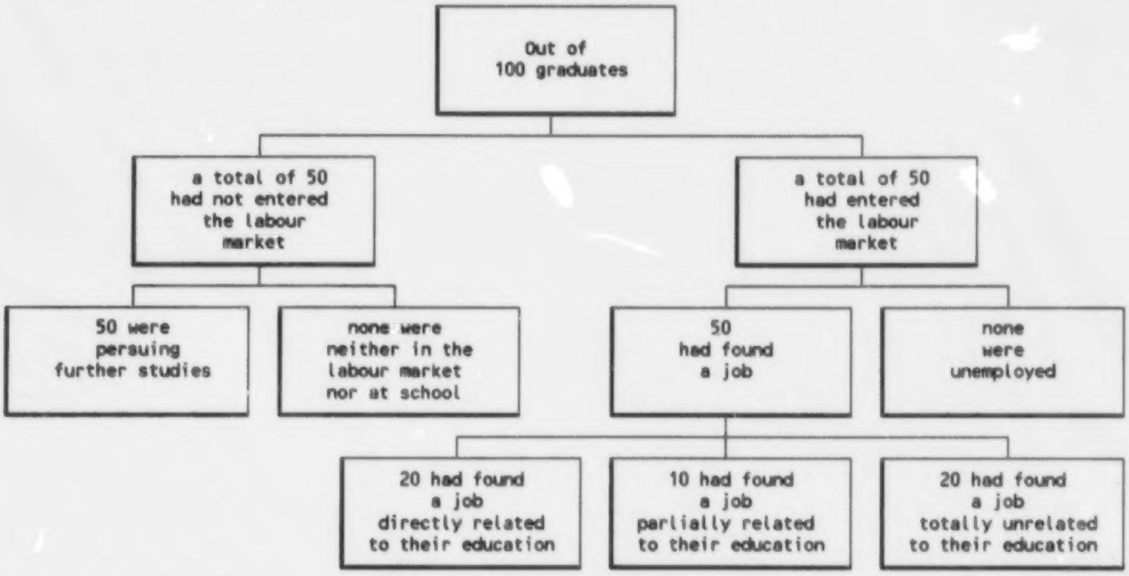
Although there are more job opportunities than for graduates with bachelor's degrees, they are below average in comparison with those available to graduates with master's degrees or doctorates as a whole.

GEOLOGY

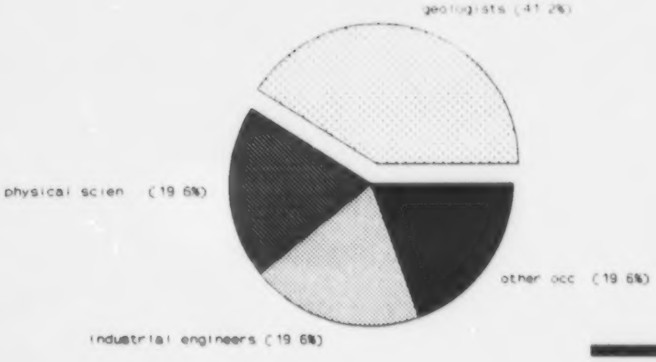
BACHELOR'S DEGREE

PHYSICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 50
had not entered
the labour
market
a total of 50
had entered
the labour
market
50 were
persuing
further studies
none were
neither in the
labour market
nor at school
50
had found
a job
none
were
unemployed
20 had found
a job
directly related
to their education
10 had found
a job
parlially related
to their education
20 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

**TRENDS IN NUMBER OF GRADUATES
AND MARKET OUTLOOK**

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	110	0.5	0.7
1985/90	130	0.5	1.0
1990/95	125	0.5	0.5
1995/2000	125	0.5	0.6

GEOLOGY
BACHELOR'S DEGREE

This field of study encompasses the specialties of geochemistry, geophysics, paleontology, crystallography and other geological sciences. These programs are offered at Concordia, Laval, McGill, Montréal, UQAM and UQAC. Prerequisites include college level mathematics, physics, chemistry and biology.

Trends and projections

The trend in number of graduates was the same as for graduates with bachelor's degrees taken as a whole. If current trends continue, Quebec universities will grant an average of 125 bachelor's degrees in this field annually during the 1990s.

Occupation after graduation

Among 1986 graduates, the proportion of those who pursued their studies after graduation was markedly higher than average. Most graduates who had decided to enter the labour market were working, but the link between education and work was below average.

Occupational profile

Given the small number of respondents who were employed, the occupational profile of these graduates was very diverse. However, the information shows that some jobs as geologists were open to these graduates.

Salary

The average annual salary of survey respondents who were working full time was $26,000, a level corresponding to the average.

General picture

Throughout the 1980s, job opportunities for these graduates were below average. Because of a resumption of prospecting in some regions of Quebec (especially Abitibi), overall conditions tended to improve during the second half of the 1980s.

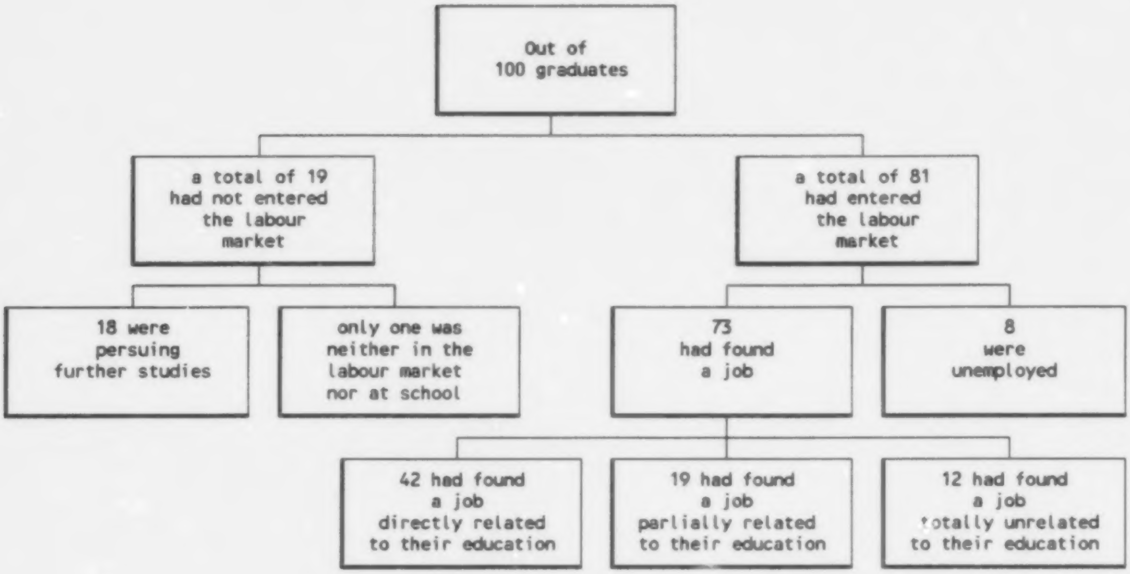
The 1990s should see a return to the level of requirements obtaining during the first half of the 1980s in Quebec. A tightening of the market is likely to follow, and job opportunities will probably remain below average.

COMPUTER SCIENCE

VOCATIONAL COLLEGE DIPLOMA

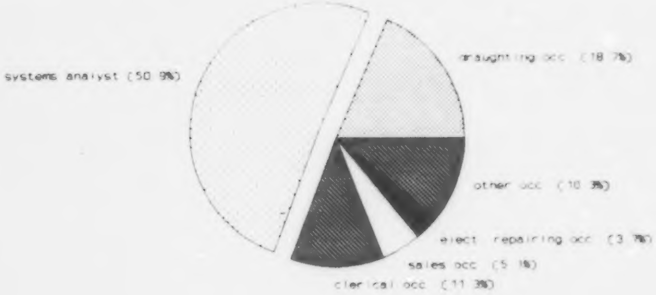
PHYSICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 19 had not entered the labour market
a total of 81 had entered the labour market
18 were persuing further studies
only one was neither in the labour market nor at school
73 had found a job
8 were unemployed
42 had found a job directly related to their education
19 had found a job parlially related to their education
12 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	1325	8.9	1.1
1985/90	1535	10.8	1.0
1990/95	1335	10.5	1.2
1995/2000	1390	10.5	1.1

COMPUTER SCIENCE
VOCATIONAL COLLEGE DIPLOMA

This field of training encompasses specialized disciplines in computerized systems technology and computer science. The computer science study program is available in all Quebec regions. Candidates wishing to acquire training in systems technology can do so at present in five regions out of twelve, namely the North Shore, Eastern Townships, Montreal, Outaouais and Quebec City regions.

Trends and projections

The number of graduates in these disciplines has grown more rapidly than average over the last 10 years, going from 3% to more than 10% of the vocational sector between the beginning and the end of the decade. The increased popularity of computer science technologies was noted primarily in the first half of the 1980s when their relative importance reached a peak of 11%. It has remained stable since then.

Occupation after graduation

One year after completing their studies, the participation rate of these graduates was comparable to the average of the sectors. This proportion is quite similar to the proportion of graduates who decided to pursue further studies. Of the candidates who chose to enter the labour market, the 10% unemployment rate was just above the average for all college disciplines taken as a whole. The relation between education and work tended to be close.

Occupational profile

Two groups dominated the occupational profile of these graduates in the year after they completed their studies. More than 50% of employed graduates were working as analysts-programmers and 20% as designers. Although to a lesser extent, the jobs of installers and repairers of electronic devices also constituted a significant proportion of entry-level jobs for these graduates.

Salary

The average salary of respondents to the Relance Survey who were working full time one year after completing their studies was $19,200 annually, i.e. a higher salary level than that of other college graduates taken as whole.

General picture

Over the last few years, graduates in these disciplines have entered a booming market in which rapid labour requirement growth made it possible to effectively absorb increasingly higher numbers of graduates. Employment opportunities have also remained more or less stable throughout the decade.

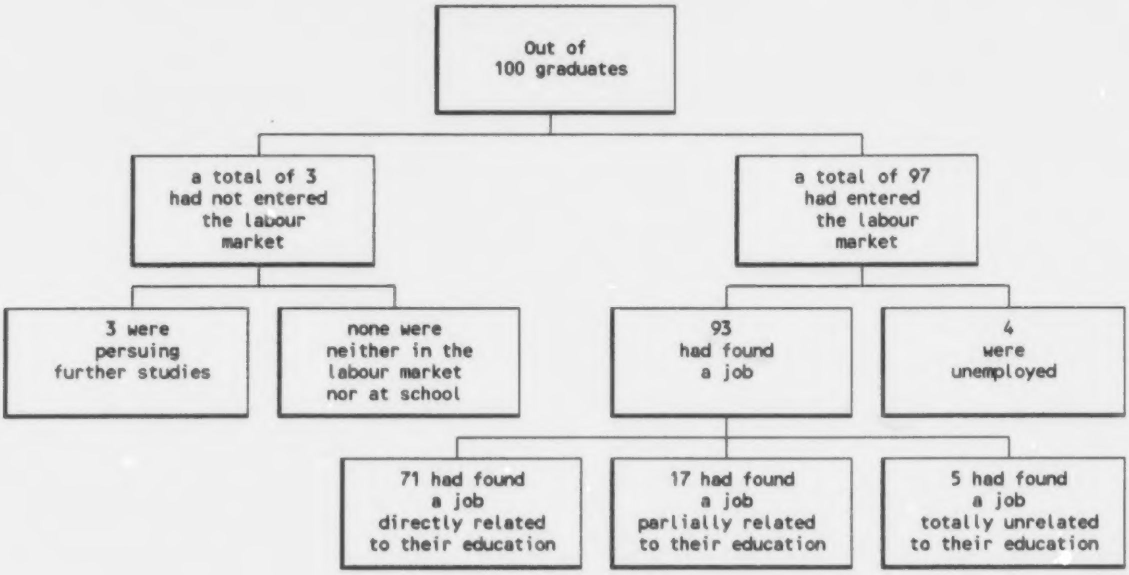
During the 1990s, the more advanced development of microcomputing and third and fourth generation software as well as the teaching of basic computer skills in a number of study programs will have the effect of limiting the market for less qualified programmers. College graduates oriented towards more traditional commercial applications will very likely face a congested market. On the other hand, graduates with skills in the application of computer technology to computer-assisted manufacturing equipment (CAM) will continue to be active in a market characterized by a shortage of specialized labour.

COMPUTER SCIENCE

BACHELOR'S DEGREE

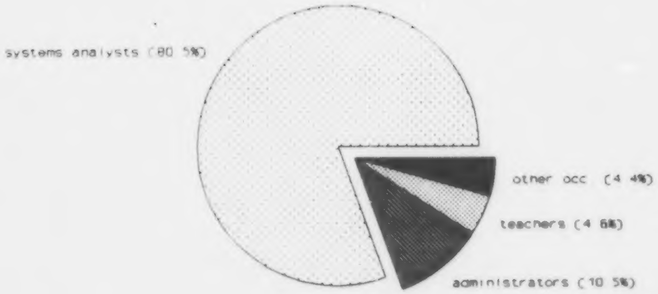
PHYSICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 3
had not entered
the labour
market
a total of 97
had entered
the labour
market
3 were
persuing
further studies
none were
neither in the
labour market
nor at school
93
had found
a job
4
were
unemployed
71 had found
a job
directly related
to their education
17 had found
a job
parlially related
to their education
5 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



**TRENDS IN NUMBER OF GRADUATES
AND MARKET OUTLOOK**

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	515	2.3	1.6
1985/90	770	3.1	1.0
1990/95	775	3.0	1.0
1995/2000	800	3.1	1.0

PHYSICAL SCIENCES

COMPUTER SCIENCE
BACHELOR'S DEGREE

This field of study encompasses the specific disciplines of computer science, engineering computer science, management computer science and computer science-mathematics. Most Quebec universities offer programs in one or another of these disciplines. Prerequisites may vary depending on discipline, but a good grounding in mathematics is usually required.

Trends and projections

During the 1980s, the popularity of this field of study grew constantly. While graduates accounted for 1% of all bachelor's degrees in 1980, the proportion had reached 3% by 1989. If this percentage remains constant, the number of graduates in these disciplines could reach an average of 775 to 800 a year.

Occupation after graduation

A much greater than average percentage entered the labour market immediately after graduation, while barely 3% pursued further studies. The placement rate of those entering the labour market was among the highest of all graduates with bachelor's degrees, and the unemployment rate among the lowest. Moreover, the link between education and work was close, given that 70% of employed graduates reported that their jobs were directly related to their studies.

Occupational profile

The close link between education and work is clearly reflected in the high number of graduates holding positions as programmer/analysts (80% of jobs). The management groups, for their part, offered a not insignificant number of openings, accounting for approximately 10% of jobs. The teaching sector also provided a possible entry to the labour market.

Salary

The average salary reported by respondents to the 1988 survey who were working full time was quite comparable to that of other graduates with bachelor's degrees. It was $28,000 two years after graduation.

General picture

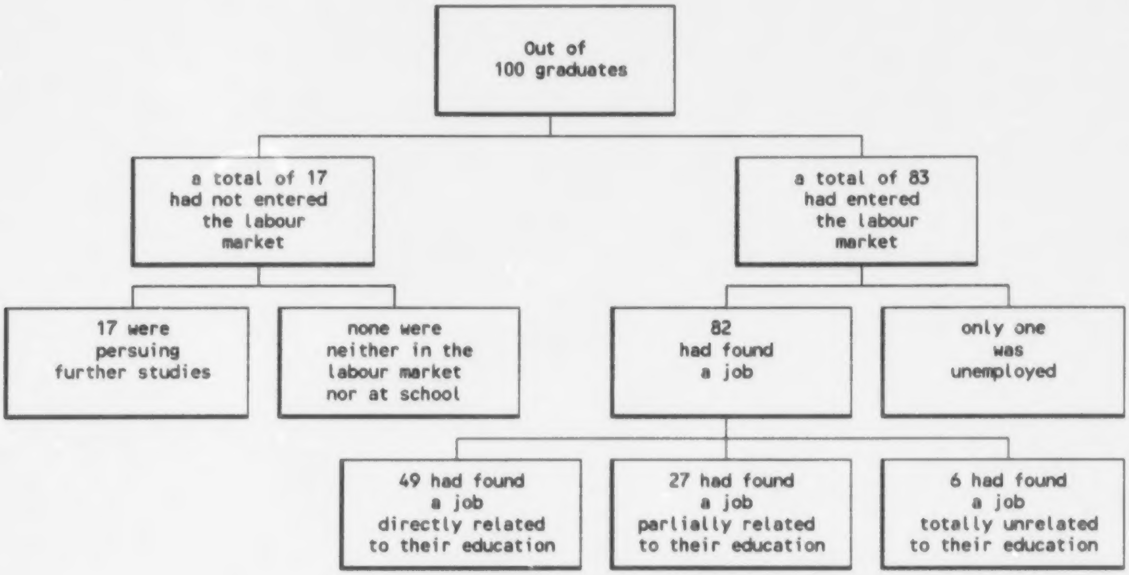
The above statistics confirm that these graduates found a labour market offering better than average job opportunities. This was so despite that fact that a drop in the number of job openings was observed during the second half of the 1980s due to a quick jump in the number of graduates.

If the number of graduates grows as expected, labour market prospects should remain steady over the coming decade. There may, however, be a few more graduates than anticipated, and as occurred in the recent past, job openings may decline slightly. Nevertheless, labour market job opportunities should remain better than the average.

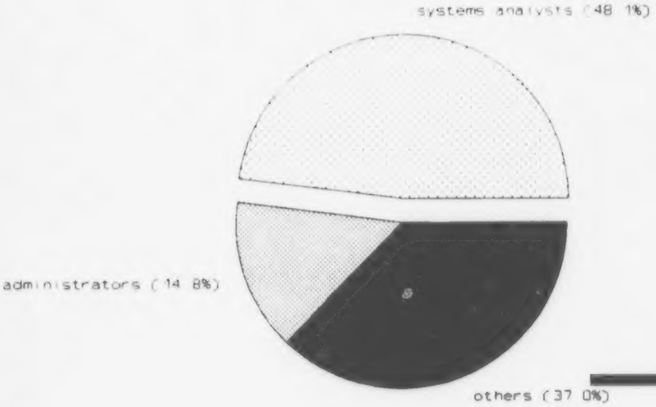
COMPUTER SCIENCE
MASTER'S DEGREE AND DOCTORATE

PHYSICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 17 had not entered the labour market
a total of 83 had entered the labour market
17 were persuing further studies
none were neither in the labour market nor at school
82 had found a job
only one was unemployed
49 had found a job directly related to their education
27 had found a job parlially related to their education
6 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	60	1.5	1.8
1985/90	100	2.0	1.0
1990/95	95	2.0	1.1
1995/2000	90	2.0	1.2

COMPUTER SCIENCE
MASTER'S DEGREE AND DOCTORATE

Graduate programs in computer science are offered at Concordia, Laval, McGill and Montréal. In addition, the University of Quebec at Montreal offers graduate programs in management informatics.

Trends and projections

As a result of the growing popularity of computer science, the number of graduates rose from 1% in the early 1980s to more than 2% by the end of the decade. The percentage is expected to level off in the coming decade. If so, an average of 90 to 100 students will graduate with master's degrees or doctorates in this field annually during the 1990s.

Graduates' labour market participation

According to Statistics Canada's survey of 1986 graduates two years after they obtained their degrees, 83% had entered the labour market, comparable with the average for all disciplines. The placement rate, 98%, was above average, and the unemployment rate was much below average: 1.2% compared with 6% for all graduates as a whole. According to respondents, the link between job and education was generally strong, and 90% said their duties were at least partly related to their studies.

Occupational profile

Nearly 50% of positions held by respondents two years after graduation were positions as system analysts. The group of university teachers accounted for 16% of jobs found. Unlike other graduates with advanced degrees working in the university, these graduates held regular teaching positions rather than positions as research or teaching assistants. This is due in large part to the fact that the discipline is young, and therefore the demand for teachers has grown rapidly. The importance of management and engineering positions in the occupational profiles of these graduates is an indication that studies in computer science can complement degrees in other disciplines.

Salary

The average annual salary of respondents working full time two years after graduation was $39,700.

General picture

Although growing less rapidly during the second half of the last decade, the demand for people to fill directly related jobs was great enough to maintain labour market entry conditions slightly above average. The occupational diversity of these graduates is an indication that graduate work in computer science can be easily incorporated into a interdisciplinary training plan and enhances job opportunities.

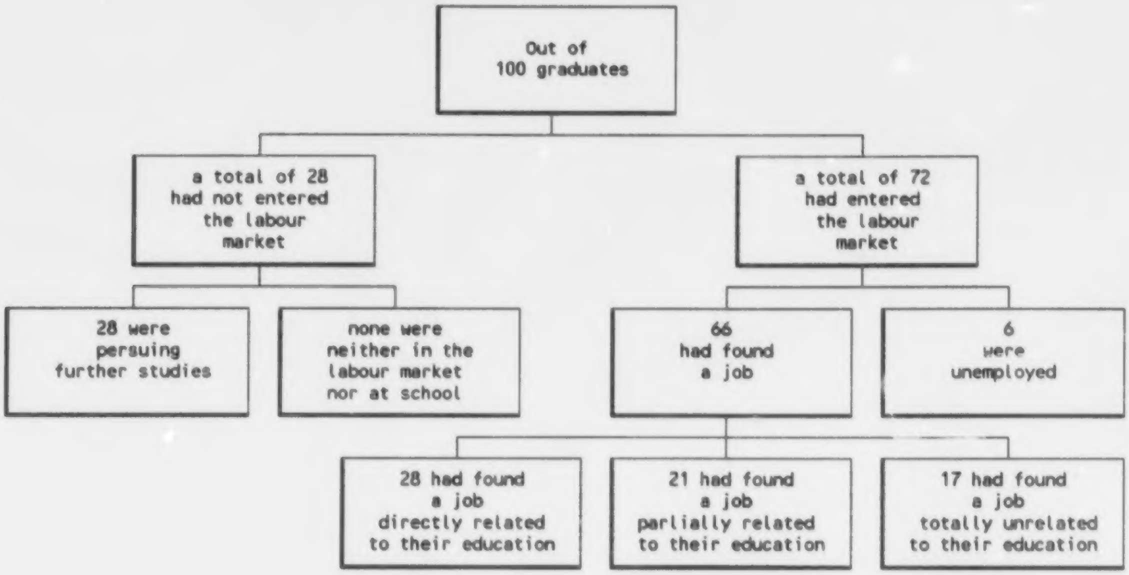
During the 1990s, job prospects in related occupations should remain above average, as skills at this level of specialization remain in demand.

MATHEMATICS

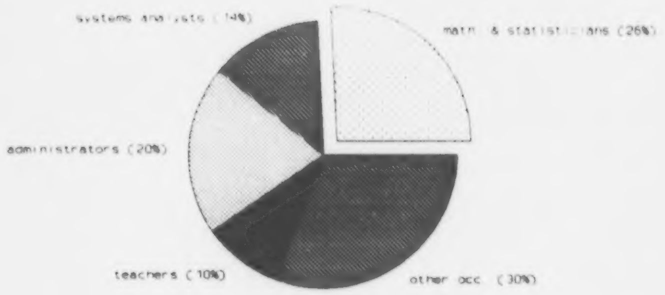
BACHELOR'S DEGREE

PHYSICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 28 had not entered the labour market
a total of 72 had entered the labour market
28 were persuing further studies
none were neither in the labour market nor at school
66 had found a job
6 were unemployed
28 had found a job directly related to their education
21 had found a job parlially related to their education
17 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	325	1.5	1.6
1985/90	485	2.0	1.0
1990/95	500	2.0	1.0
1995/2000	500	1.9	1.0

MATHEMATICS
BACHELOR'S DEGREE

This group includes the disciplines of actuarial science, statistics and other areas of mathematics. Concordia, Bishop's, Laval, McGill, Montréal, Sherbrooke and the Montréal and Trois-Rivières campuses of the University of Quebec offer programs in mathematics with the possibility of specialization. Prerequisites vary depending on institution, but of course a good grounding in mathematics is always required.

Trends and projections

From 327 between 1980 and 1985, the average number of graduates rose to 490 in the second half of the decade, an above average rate of growth. During the 1990s, the number of graduates should remain about the same (500 annually).

Occupation after graduation

Labour market entry from these graduates was quite similar to that of other graduates with bachelor's degrees in terms of both placement and unemployment rate. However, jobs tended to be less directly related to education.

Occupational profile

Mathematicians, statisticians and actuaries comprise the occupational group offering the most job opportunities for these graduates (25%). The groups of systems analysts and financial officers are the other two groups in which jobs related to education have been available.

Salary

The average salary reported by respondents to the 1988 survey who were working full time was $28,000 annually. This is close to the average for graduates with bachelor's degrees.

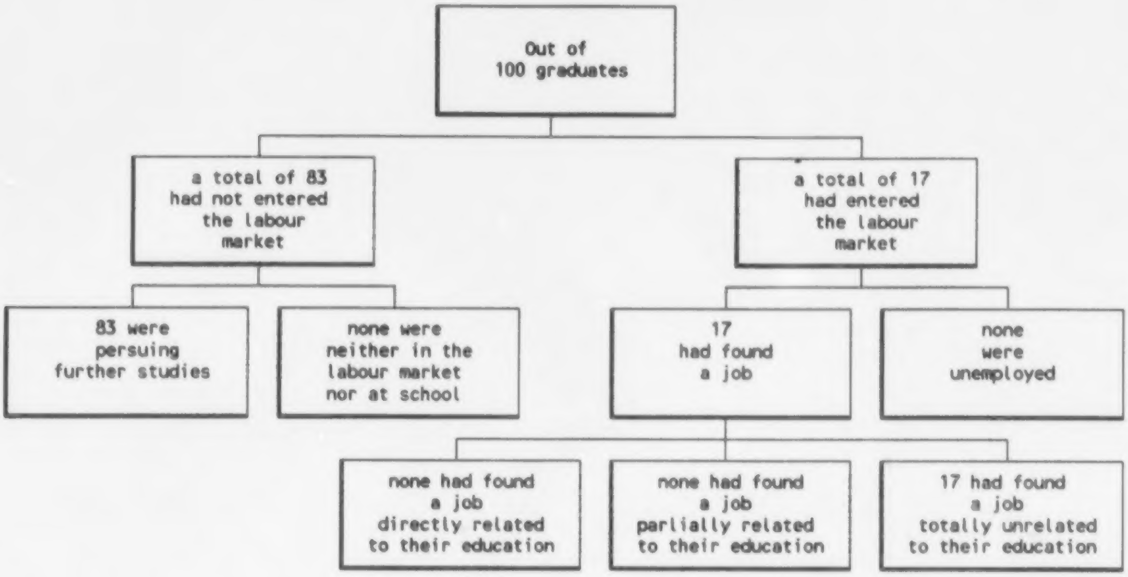
General picture

Since the number of graduates increased faster than requirements over the second half of the 1980s, job opportunities in related occupations diminished somewhat. This reduced labour market access in this discipline to below average.

During the 1990s, the labour market situation is likely to be similar to that obtaining over the past few years. Any increase in requirements is likely to be in computer science occupations rather than in those of mathematicians and statisticians.

PHYSICS PHYSICAL SCIENCES
BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 83
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83 were
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to their education
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17 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES NUMBER OF GRADUATES

non available

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	140	0.6	0.8
1985/90	170	0.7	1.0
1990/95	175	0.7	0.5
1995/2000	175	0.7	0.6

PHYSICS
BACHELOR'S DEGREE

This group of disciplines encompasses the specialties of astronomy, electricity, mechanics, optics, oceanography, theoretical physics, thermal physics, mathematical physics and other physical sciences. Most Quebec universities offer a bachelor's program in physics. Mathematics, physics, chemistry and biology are prerequisites in addition to a Diploma of Collegial Studies.

Trends and projections

Between 1980 and 1989, the number of graduates in this discipline rose at more or less the same rate as the average. If this trend continues, 175 students will graduate each year during the 1990s.

Occupation after graduation

The large majority of graduates pursue higher level studies. The others are generally active in the labour market but the positions they hold have very little relation to their education.

Occupational profile

Given the small number of employed graduates and the weak link between the positions they hold and their education, it was not possible to establish an occupational profile from the available data.

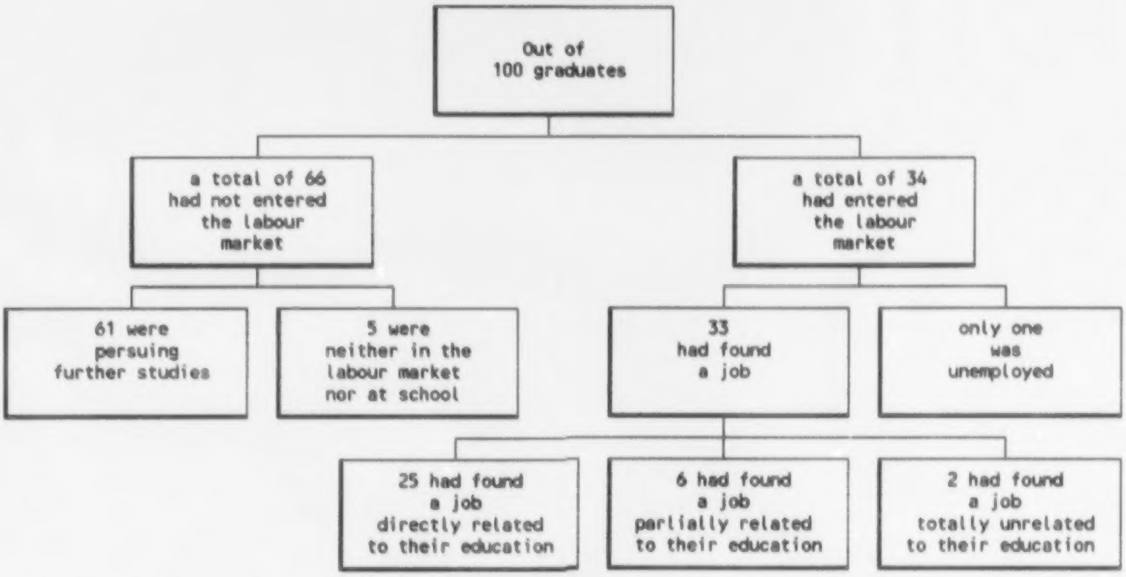
General picture

These graduates usually pursue studies at the master's level. Opportunities for related employment after completing a bachelor's degree are very few.

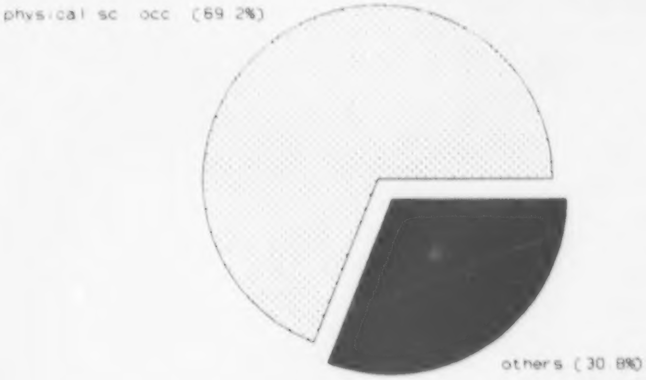
OTHER PHYSICAL SCIENCES **PHYSICAL SCIENCES**

MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 66 had not entered the labour market
a total of 34 had entered the labour market
61 were persuing further studies
5 were neither in the labour market nor at school
33 had found a job
only one was unemployed
25 had found a job directly related to their education
6 had found a job partially related to their education
2 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	85	2.1	1.8
1985/90	125	2.4	1.0
1990/95	120	2.5	0.9
1995/2000	110	2.5	1.0

OTHER PHYSICAL SCIENCES

MASTER'S DEGREE AND DOCTORATE

Various institutions offer graduate programs in physics, meteorology, oceanography, crystallography and fluid mechanics.

Trends and projections

During the 1980s, these disciplines accounted for 2.5% of graduate degrees. If this trend continues over the coming years, there will be an average of 30 graduates in these fields a year in Quebec.

Graduates' labour market participation

Like graduates with bachelor's degrees, a high percentage of these graduates were continuing their education two years after graduation. Of those who had decided to enter the labour market, most of them held jobs more or less directly related to their education.

Occupational profile

Nearly 70% of graduates working two years after graduation held jobs in the natural sciences, physics or engineering. Physicists, biologists and geologists accounted for the greatest number of jobs.

Salary

The average annual salary of 1986 graduates working full time and who responded to the 1988 survey was $35,800.

General picture

The high percentage of graduates who decided to pursue further studies after obtaining a master's degree or doctorate is an indication of the limited demand for these professionals. Further education is often required for successful labour market entry.

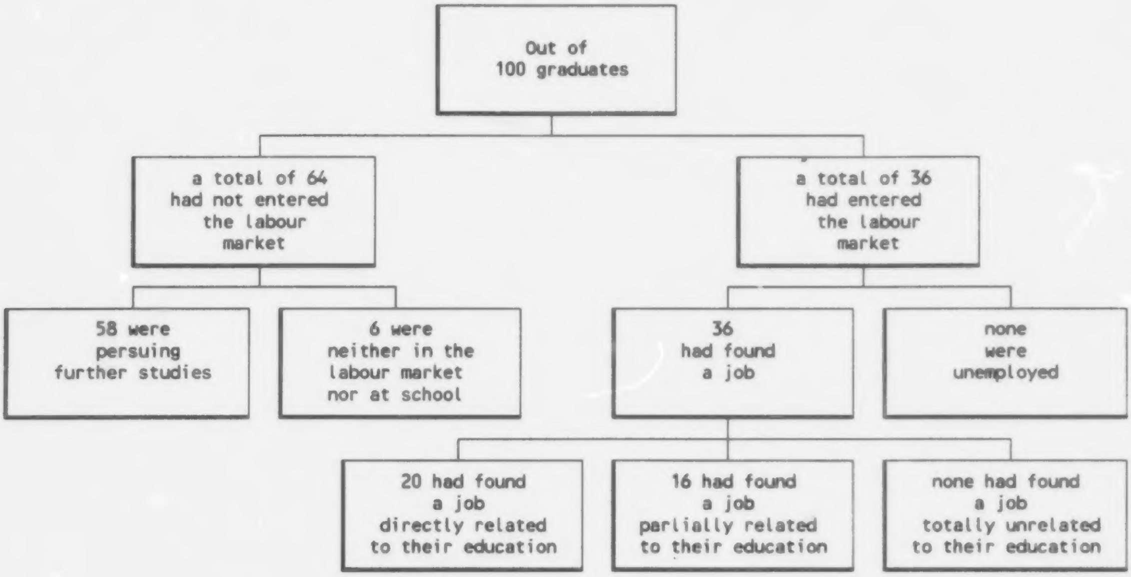
SOCIAL SCIENCES

LAW

SOCIAL SCIENCES

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation



Out of 100 graduates

a total of 64 had not entered the labour market

a total of 36 had entered the labour market

58 were persuing further studies

6 were neither in the labour market nor at school

36 had found a job

none were unemployed

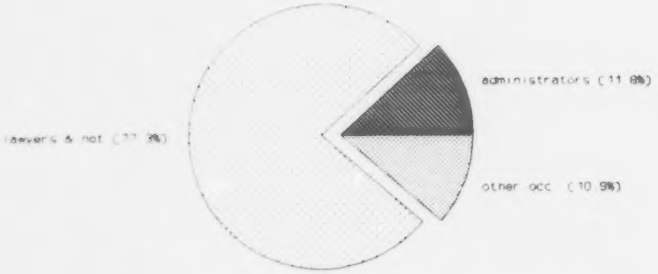
20 had found a job directly related to their education

16 had found a job parlially related to their education

none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	835	3.8	1.3
1985/90	875	3.5	1.0
1990/95	875	3.4	1.0
1995/2000	900	3.5	0.9

LAW
BACHELOR'S DEGREE

This field of study comprises the various specialties in law and jurisprudence. Most Quebec universities offer a program in this discipline. There is no specific prerequisite but high academic standing at the college level is required.

Trends and projections

The number of graduates in this discipline has remained steady at approximately 900 annually during the 1980s. This has meant that the proportion of these graduates to the total number of graduates with bachelor's degrees dropped from 4% to 3.5% between 1980 and 1989. During the 1990s, the number of graduates is expected to remain at approximately 900 annually.

Occupation after graduation

Because of the requirement that these graduates take a year of courses at the Quebec Bar's professional training school and article for six months in a lawyer's office, the proportion of graduates pursuing further studies two years after graduation is very much higher than that of other graduates at the same level. Among those who had entered the labour market, the rate of placement in related occupations was much greater than that in other disciplines.

Occupational profile

The occupations pursued by graduates two years after obtaining their degrees show clearly the close link with their discipline. More than 75% of them were working as lawyers or notaries.

General picture

Unfortunately we have no data on salaries, but the very high placement rate of graduates in the labour market and the very close link between jobs and education would indicate that job entry conditions for these graduates are better than average. However, the high proportion of those who were continuing their education two years after obtaining their degrees reveals the potential difficulty some candidates have in being called to the Bar.

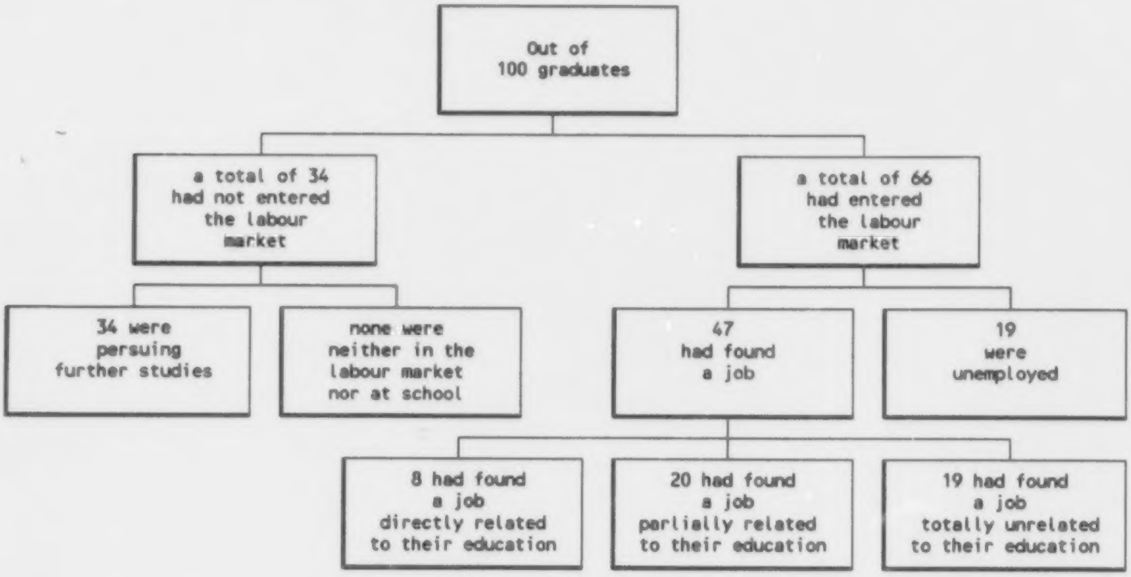
During the coming years, labour market entry conditions should remain about the same as those that have prevailed over the past number of years.

ECONOMICS

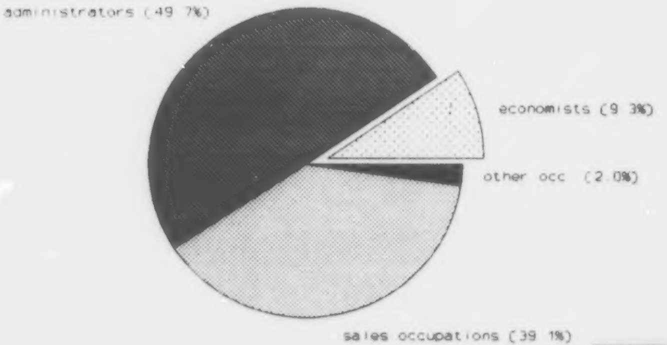
BACHELOR'S DEGREE

SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 34 had not entered the labour market
a total of 66 had entered the labour market
34 were persuing further studies
none were neither in the labour market nor at school
47 had found a job
19 were unemployed
8 had found a job directly related to their education
20 had found a job partially related to their education
19 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	545	2.5	2.1
1985/90	685	2.8	1.0
1990/95	700	2.7	1.1
1995/2000	700	2.7	1.1

ECONOMICS
BACHELOR'S DEGREE

In addition to general studies in economics, this field of study includes programs in applied economics generally offered in departments of administration. Most Quebec universities offer programs of studies in these disciplines. Specific mathematics courses are generally required in addition to a Diploma of Collegial Studies.

Trends and projections

During the 1980s, the number of graduates in this field of study grew at a slightly faster rate than in other disciplines, reflecting a growing interest in economics in general. If the trends of the past few years continue, an average of 700 students annually will graduate in economics over the coming decade.

Occupation after graduation

According to the 1988 survey of graduates, less than 50% of students who graduated in this discipline were employed two years after obtaining their degrees. This was appreciably below the average for graduates with bachelor's degrees taken as a whole. Similarly, jobs directly related to education were less frequent than for the whole group. It is therefore not surprising to note that more of these graduates had decided to pursue further studies.

Occupational profile

Approximately 50% of these graduates were working in the management sector. The major group of salespersons also accounted for a sizeable number of openings, with nearly 40% of positions held. Economists accounted for less than 10% of total jobs.

Salary

The average annual salary of $26,700 reported by respondents working full time was close to that for graduates with bachelor's degrees taken as a whole.

General picture

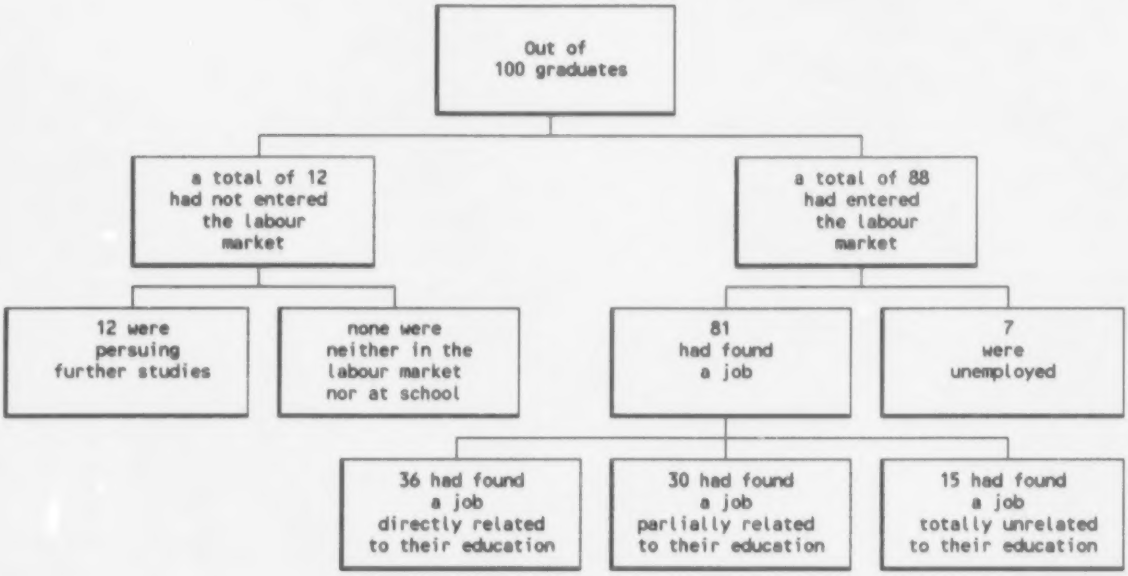
The relatively high unemployment rate and small number of jobs directly related to education denote a tight labour market for these graduates. This probably explains in large measure the small proportion of graduates who would make the same academic choice: only 40% compared with nearly 70% of graduates with bachelor's degrees taken as a whole. On the other hand, the significant number of these graduates holding jobs in management and sales indicates that this training opens doors to opportunities in a related, less encumbered market.

During the 1990s, the labour market for graduates who would like to work as economists is likely to remain very difficult, because of the great number of graduates and the industrial concentration of this occupation, dominated by the public service. The more open management market, however, will continue to provide graduates interested in working in this sector with more optimistic prospects.

ECONOMICS — SOCIAL SCIENCES

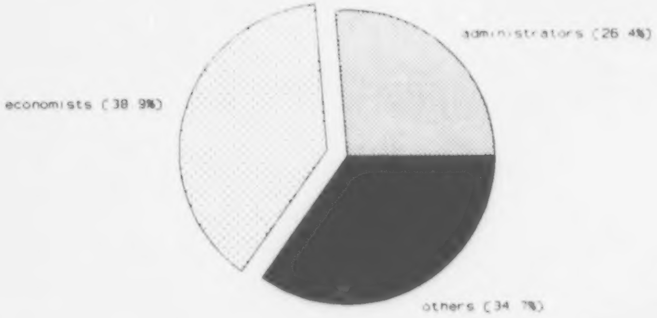
MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 12 had not entered the labour market
a total of 88 had entered the labour market
12 were persuing further studies
none were neither in the labour market nor at school
81 had found a job
7 were unemployed
36 had found a job directly related to their education
30 had found a job partially related to their education
15 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	85	2.1	2.1
1985/90	110	2.2	1.0
1990/95	100	2.0	1.3
1995/2000	90	2.0	1.5

ECONOMICS
MASTER'S DEGREE AND DOCTORATE

Most Quebec universities offer master's and doctoral programs in economics. Laval and McGill offer master's programs in rural economics.

Trends and projections

During the 1980s, the number of graduates in this discipline grew at approximately the same rate as that for all disciplines as a whole. If the trend continues in the next decade, an average of 90 to 100 degrees will be granted each year.

Graduates' labour market participation

According to the 1988 survey of 1986 graduates, a percentage slightly higher than the average had entered the labour market two years after graduation. Their placement rate, however, was slightly below that for other disciplines, resulting in an unemployment rate of 9% compared with 6% for graduates with master's degrees or doctorates as a whole. Placement in occupations related to education was below average but better than the rate for graduates with bachelor's degrees.

Occupational profile

The proportion of graduates with master's degrees or doctorates working as economists was 40%, compared with 10% for graduates with bachelor's degrees. Another 25% were working as managers, including 12% as financial officers.

Salary

The average annual salary of these graduates was comparable with that for graduates with advanced degrees as a whole ($38,000).

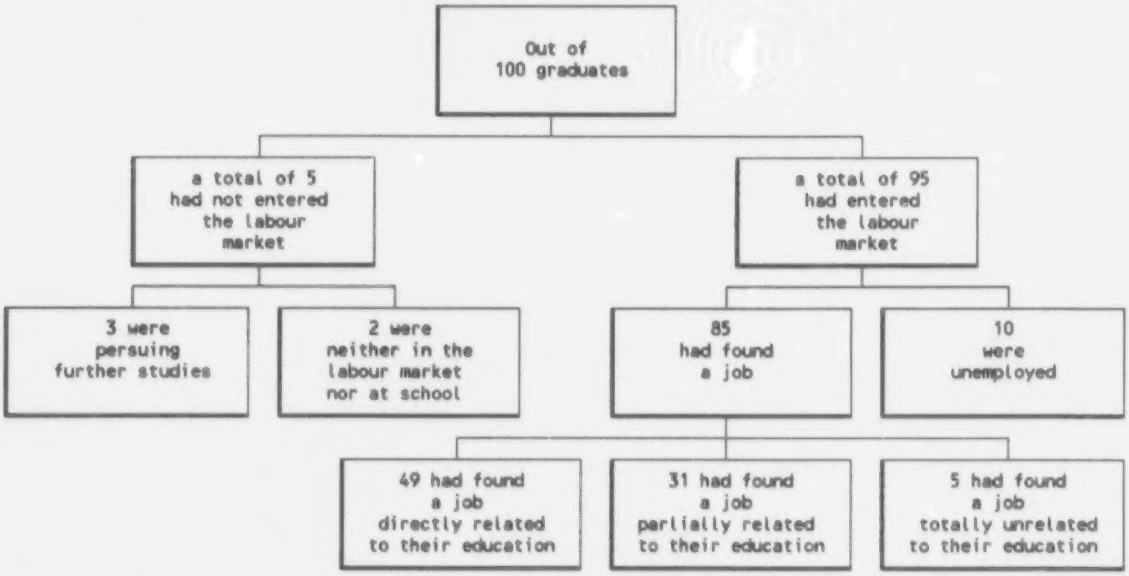
General picture

Job opportunities for postgraduates in economics have improved significantly in relation to those available to graduates with bachelor's degrees. Both groups, however, have shown a decline over the past decade, with job opportunities dropping from abundant to average.

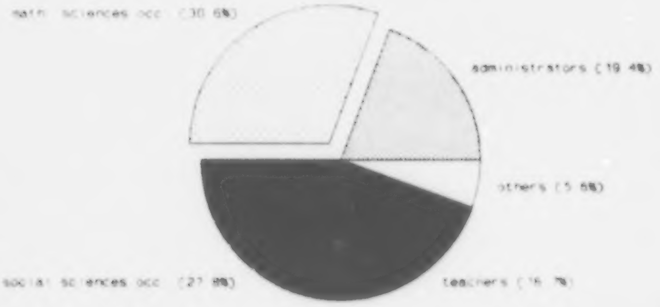
Trends in demand for people to fill jobs related to education in this field are expected to mean somewhat improved job opportunities. Compared with other types of training, graduate degrees in economics should continue to provide average access to the labour market.

HUMAN ENVIRONMENT **SOCIAL SCIENCES**
MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 5 had not entered the labour market
a total of 95 had entered the labour market
3 were persuing further studies
2 were neither in the labour market nor at school
85 had found a job
10 were unemployed
49 had found a job directly related to their education
31 had found a job partially related to their education
5 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	115	2.8	1.3
1985/90	130	2.6	1.0
1990/95	140	3.0	1.2
1995/2000	140	3.2	1.3

SOCIAL SCIENCES

HUMAN ENVIRONMENT
MASTER'S DEGREE AND DOCTORATE

This field of multidisciplinary training is composed of specialties in land use and regional development (Laval), environmental sciences (UQAM, UQTR and Sherbrooke), regional studies (UQAC) and urbanism (McGill and Montréal). In certain cases, training in this field of specialization may be obtained through other programs. The most relevant disciplines include biology, chemistry, geography, economics, engineering and architecture.

Trends and projections

The percentage of graduates in these disciplines has remained constant over the past number of years, although the composition of the specialties have changed considerably. Greater concern for the environment has led to the development of specialized programs, and this has changed the nature of the degrees granted. This field of study is very likely to gain in popularity among graduate students in the coming years.

Graduates' labour market participation

According to the 1988 survey of 1986 graduates, the labour market participation rate of these graduates was above average: barely 3% were pursuing further studies two years after graduation, compared with an average of 16% in other disciplines. The 10% unemployment rate among those who had entered the labour market was above average. On the other hand, the vast majority of jobs found were related to education.

Occupational profile

The varied occupational profile of graduates employed two years after graduation reflects the multidisciplinary dimension of this field of training. Nearly 30% of jobs were in the natural sciences and engineering category, another 30% in social sciences (including 20% in the group of economists), 20% in the management category, and 15% in teaching.

Salary

The average annual salary of survey respondents was $32,000, slightly lower than the average for graduates with master's degrees or doctorates as a whole.

General picture

Over the past number of years, labour market entry opportunities in these disciplines were average compared with those in other disciplines. The unemployment rate was slightly above average, but this seems to be more a reflection of the high labour market participation rate than the result of a lack of openings in related occupations.

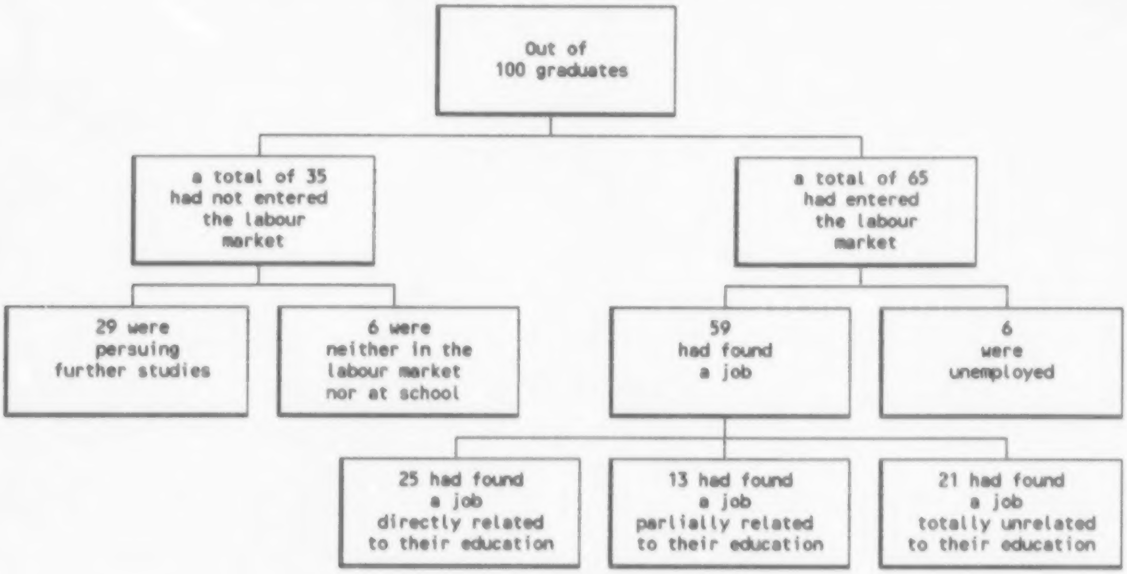
The 1990s should offer encouraging prospects for these graduates. Greater demand in occupations related to environmental issues is expected, in particular for people with training in the natural sciences and engineering.

GEOGRAPHY

BACHELOR'S DEGREE

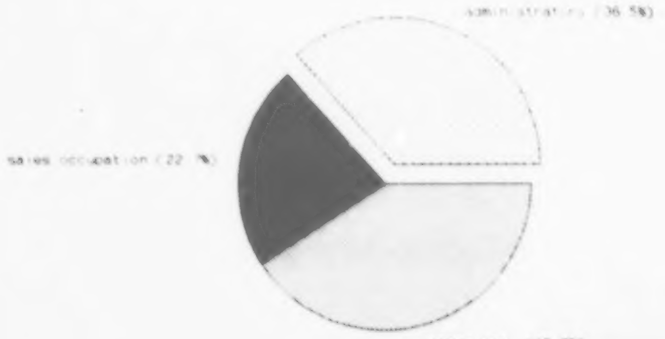
SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 35 had not entered the labour market
a total of 65 had entered the labour market
29 were persuing further studies
6 were neither in the labour market nor at school
59 had found a job
6 were unemployed
25 had found a job directly related to their education
13 had found a job partially related to their education
21 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	265	1.2	0.2
1985/90	240	1.0	1.0
1990/95	250	1.0	1.0
1995/2000	250	1.0	0.9

GEOGRAPHY
BACHELOR'S DEGREE

In addition to the geography programs available at most Quebec universities, Concordia, McGill, Sherbrooke and UQAM offer programs in physical geography. Prerequisites for the latter include more advanced mathematics courses in addition to the Diploma of Collegial Studies required for the geography program.

Trends and projections

Since the early 1980s, the popularity of this program has been declining, the number of graduates dropping from 375 to 250. If this proportion remains constant, approximately 250 students a year will graduate in geography.

Occupation after graduation

According to the survey of graduates, the participation rate of graduates in geography was slightly lower than that of graduates with bachelor's degrees taken as a whole. This was the result of a lower employment rate and a higher proportion of graduates pursuing further studies than the average. Although nearly 65% of employed graduates were working in jobs at least partially related to their education, this percentage is somewhat lower than the average for graduates with a first degree.

Occupational profile

Only slightly more than 10% of employed graduates held jobs in the social sciences occupations, including geographers. The other employed graduates were working in jobs related to administration.

Salary

The average annual salary of these respondents to the survey of graduates was $24,700.

General picture

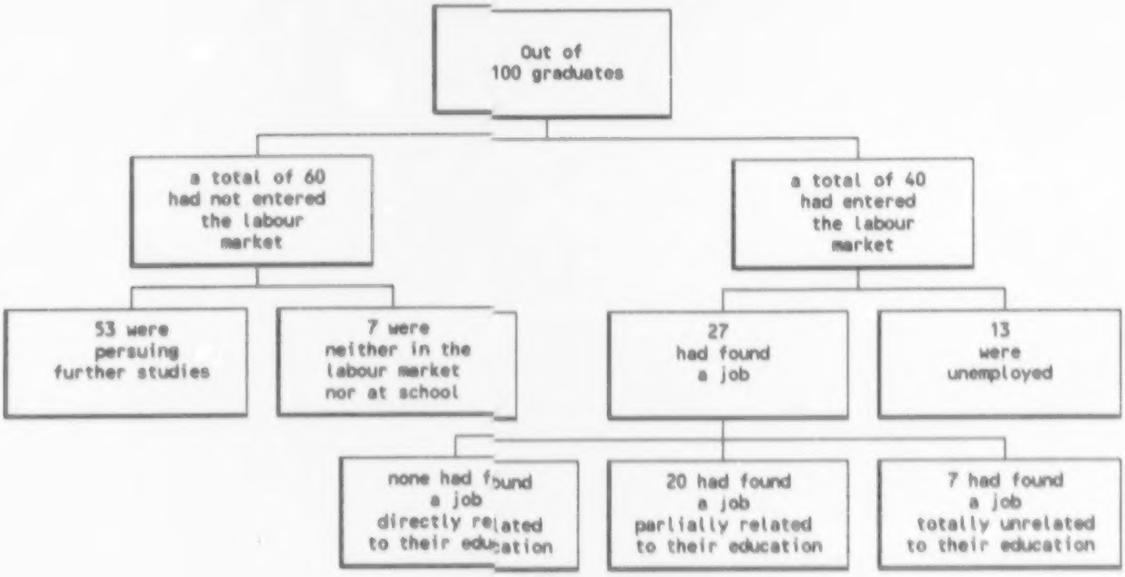
The information presented above reveals a labour market situation less favourable than the average. Traditionally openings for these graduates have been in the federal and provincial public services, which have made significant budget cuts over the past few years. A markedly lower than average proportion said they would make the same academic choice if they had their education to do over again.

The 1990s is not likely to see a change in the situation that has obtained over the past number of years. Projections for the group of social sciences occupations indicate that the current surplus of labour is likely to persist throughout the period.

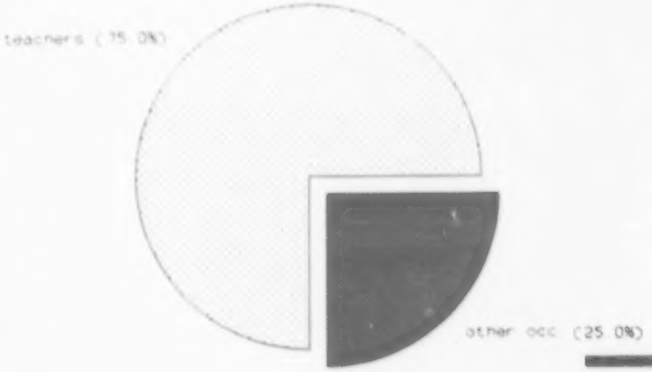
PSYCHOLOGY
BACHELOR'S DEGREE

SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 60 had not entered the labour market
a total of 40 had entered the labour market
53 were persuing further studies
7 were neither in the labour market nor at school
27 had found a job
13 were unemployed
none had found a job directly related to their education
20 had found a job partially related to their education
7 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	745	3.4	3.9
1985/90	880	3.6	1.0
1990/95	900	3.5	2.0
1995/2000	925	3.6	2.0

PSYCHOLOGY
BACHELOR'S DEGREE

This field of study encompasses the disciplines of behavioural psychology, child psychology, and other psychology specialties except educational psychology. The field also includes vocational counselling. Laval is the only university that offers a program in vocational counselling, whereas the other disciplines are offered in most Quebec universities. Advanced mathematics, biology and psychology courses are prerequisites.

Trends and projections

In the early 1980s, there were about 750 psychology graduates each year. The number started to rise in 1985, reaching 900 in 1989. The number of graduates is expected to remain at this last level during the 1990s.

Occupation after graduation

At the bachelor's level this discipline is characterized by a low participation rate two years after graduation. This situation can easily be explained by the fact that a master's degree is required for membership in the Quebec Association of Psychologists, which is necessary for practising this occupation in Quebec. A high unemployment rate and a weak link between education and work was recorded among those who chose to enter the labour market immediately.

Occupational profile

The occupational profile of the graduates who entered the labour market was dominated by teaching-related occupations. The most common related positions included vocational counsellor and university research assistant.

General picture

The occupation of psychologist is the preserve of graduates with a master's degree. Those who do not wish to pursue studies at the master's level generally find employment opportunities in teaching- related occupations. In this respect, graduates with an educational guidance degree enjoy the most opportunities in the labour market even if conditions appear difficult in terms of placement. These graduates expressed a high degree of satisfaction approaching that of graduates with bachelor's degrees taken as a whole, and more than two thirds said they were satisfied with their academic choice.

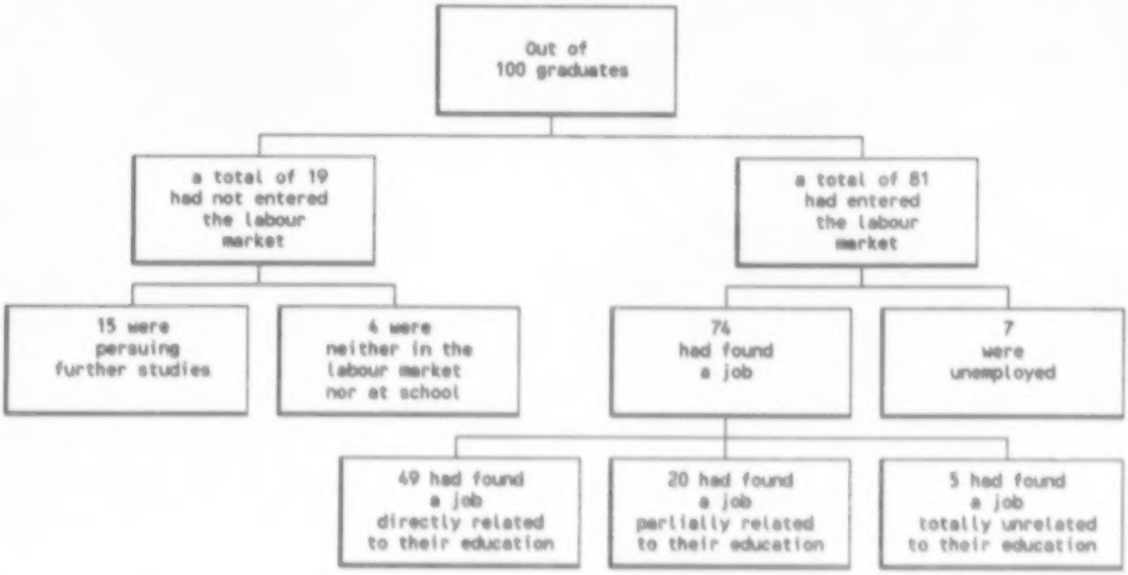
For those who do not wish to pursue studies at the master's level, teaching-related occupations continue to offer the best opportunities. In this respect, access to related occupations is expected to improve owing to the forecast increase in the demand for teachers of exceptional students. Graduates specializing in educational psychology are the most serious competitors for these positions. Also, an advanced knowledge of educational methods will be a major asset for taking full advantage of these improved market conditions.

PSYCHOLOGY

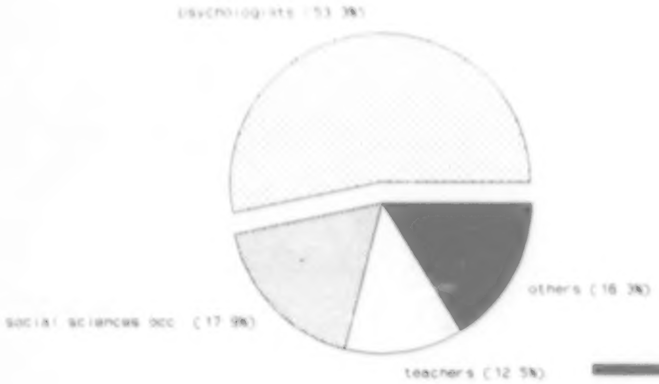
SOCIAL SCIENCES

MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 19 had not entered the labour market
a total of 81 had entered the labour market
15 were persuing further studies
4 were neither in the labour market nor at school
74 had found a job
7 were unemployed
49 had found a job directly related to their education
20 had found a job partially related to their education
5 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	300	7.2	1.5
1985/90	305	6.0	1.0
1990/95	280	6.0	1.0
1995/2000	260	6.0	1.3

PSYCHOLOGY
MASTER'S DEGREE AND DOCTORATE

Most Quebec universities offer graduate programs in psychology. In Quebec, certification as a clinical psychologist requires a master's degree.

Trends and projections

In terms of number of degrees granted, this field of study ranks second at the graduate level. The proportion dropped during the 1980s, however, from 8.4% in 1980 to 6.0% in 1989. If the current trend continues, the number of graduates will drop from 300 to 250 annually by the end of the decade.

Graduates' labour market participation

The labour market entry statistics for these graduates are almost the same as those for graduates with master's degrees or doctorates as a whole. Approximately 80% had entered the labour market two years after graduation. The unemployment rate was 8.5%, slightly above average. And 95% of jobs held were at least partly related to education.

Occupational profile

Nearly 55% of graduates employed two years after graduation were working as psychologists, according to the survey of graduates. More than 15% had found jobs in other social science occupational groups. As in the case of their colleagues with bachelor's degrees, teaching also offered a not inconsiderable number of openings, accounting for 10% of jobs found. The health care and social services sector was the biggest employer of these specialists: 26% of jobs were in the social services; 20%, in hospital services; and 10%, in private clinics.

Salary

Respondents in this discipline who were working full time when the survey was conducted had an average annual salary of $33,100.

General picture

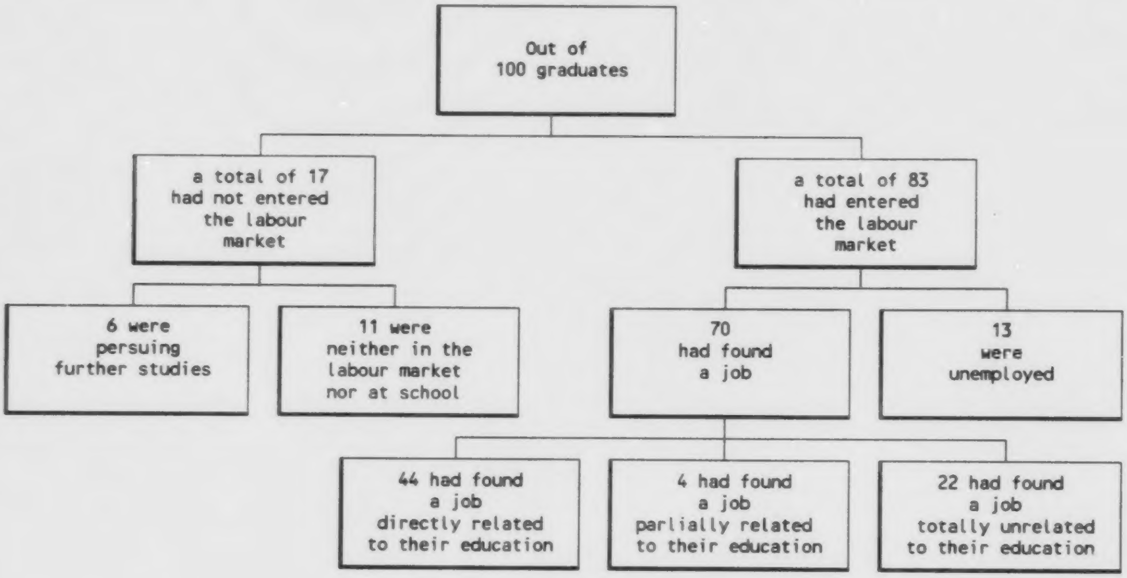
Although the labour market situation facing these graduates was comparable with that facing other graduates at the same level, it was a distinctly better than the situation facing graduates with bachelor's degrees in psychology. In addition to allowing these graduates to practise the profession, their degrees gave them some advantage when applying for indirectly related jobs in the social sciences and teaching.

For the 1990s, the data indicate that demand for related occupations should remain constant and even rise slightly during the second half of the decade. Generally, prospects are expected to remain average throughout the period.

CIVIL PROTECTION
SECONDARY VOCATIONAL

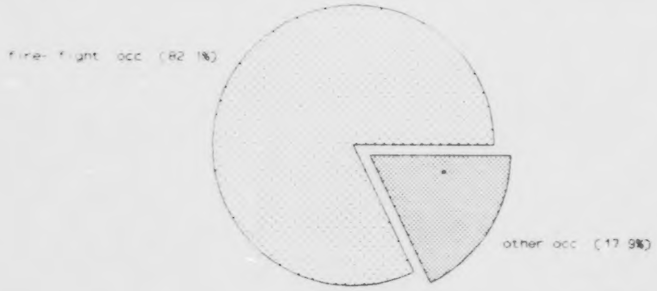
SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 17 had not entered the labour market
a total of 83 had entered the labour market
6 were persuing further studies
11 were neither in the labour market nor at school
70 had found a job
13 were unemployed
44 had found a job directly related to their education
4 had found a job parlially related to their education
22 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	70	0.3	---
1985/90	70	0.6	---
1990/95	70	0.7	---
1995/2000	70	0.7	---

SOCIAL SCIENCES

CIVIL PROTECTION
SECONDARY VOCATIONAL

This field of study includes the disciplines of fire prevention and firefighting. Only one school commission (Chomedey-de-Laval) offered this program in 1990.

Trends and projections

The popularity of this field of training has been more consistent than that of other vocational disciplines at the secondary level in recent years.

Occupation after graduation

An above-average proportion of graduates entered the labour market immediately after graduation. The market could accommodate this high participation rate since almost all the 1987 graduates had found a job, with only one graduate unemployed one year after graduation. A high proportion of the jobs obtained were directly related to education and were at the same time permanent and full time.

Occupational profile

Most of the graduates were working as firefighters (80%). Municipalities were the main employers.

Salary

The average annual salary of $21,900 for these graduates was higher than the average of $13,600 for all the other disciplines at the secondary level.

General picture

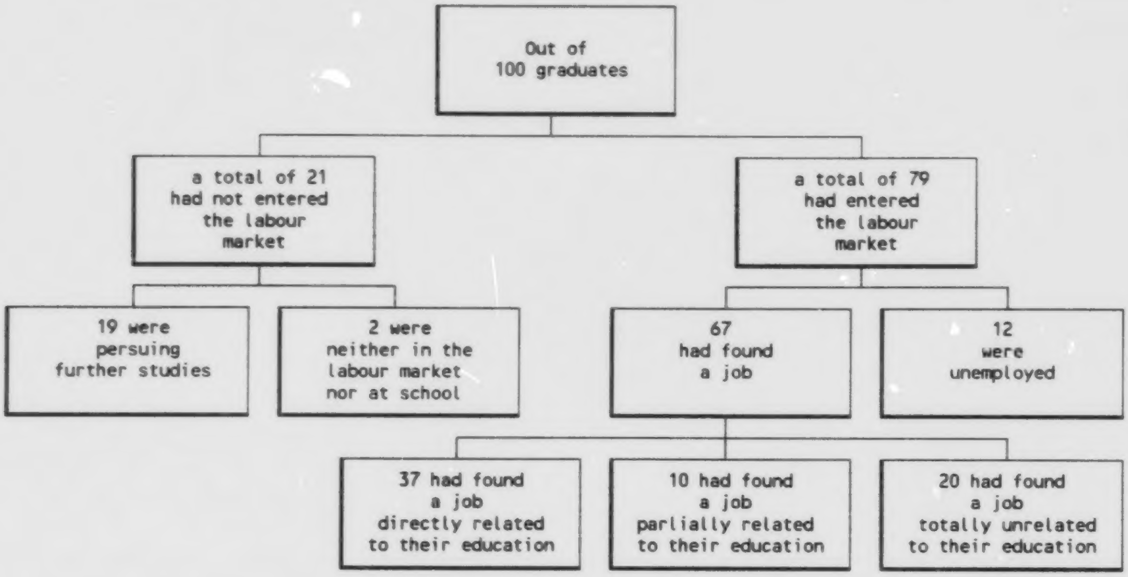
This training is a mandatory prerequisite to enter firefighting jobs in the various municipal fire departments in Quebec. Over the next few years, certain fire departments, including that of the City of Montreal, are expected to maintain high employment levels as in recent years. The placement outlook should therefore be among the most promising.

CORRECTIONAL AND PROTECTIVE SERVICES

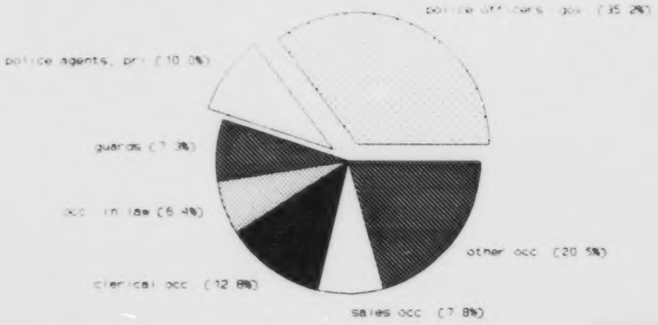
SOCIAL SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 21 had not entered the labour market
a total of 79 had entered the labour market
19 were persuing further studies
2 were neither in the labour market nor at school
67 had found a job
12 were unemployed
37 had found a job directly related to their education
10 had found a job parlially related to their education
20 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	515	3.5	0.7
1985/90	490	3.4	1.0
1990/95	445	3.5	1.5
1995/2000	460	3.5	1.4

CORRECTIONAL AND PROTECTIVE SERVICES

VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses specialties in police technology, correctional technology, legal technology and prevention technology. While training in police technology is available in all Quebec regions, other specialized disciplines are offered only by some institutions in the Quebec City and Montreal areas.

Trends and projections

After undergoing a rapid increase towards the end of the 1970s, the number of graduates in these disciplines subsequently grew at approximately the same rate as in all other disciplines in the vocational college sector. If it maintains its relative importance, this number is expected to decrease slightly during the 1990s, to attain an average of 440 to 460 graduates an[illegible]

Occupation after graduation

Police technology graduates must complete a practicum at the Nicolet Police Institute if they wish to join the ranks of a municipal or provincial police force. Although it is possible to be admitted to this school directly, candidates who have been already recruited by a police force are given priority. This situation largely explains the nature of the relation between education and work, which was either direct or non-existent for most of the graduates. A large number of graduates entered the labour market temporarily in the hope of being recruited in the following years. All the same, the placement rate for graduates who entered the labour market was high, reaching 85%.

Occupational profile

The occupational group composed of government police officers provided by far the most job openings for graduates, accounting for 35% of the jobs obtained. However, the private detective and security guard groups also provided labour market openings for police technology graduates, accounting for 10% and 5%, respectively, of the jobs obtained. For their part, graduates in other correctional services disciplines tended to enter primarily occupations in law such as bailiff, judicial officer, contract clerk and legal assistant as well as the social worker groups such as case-aides or half-way house supervisors. These various occupational categories accounted for about 10% of the jobs held by the graduates of correctional and protective services taken as a whole.

Salary

Overall, graduates who were working full time after completing their studies were earning an average annual salary of $20,600, a higher salary level than that of the average of vocational college graduates.

General picture

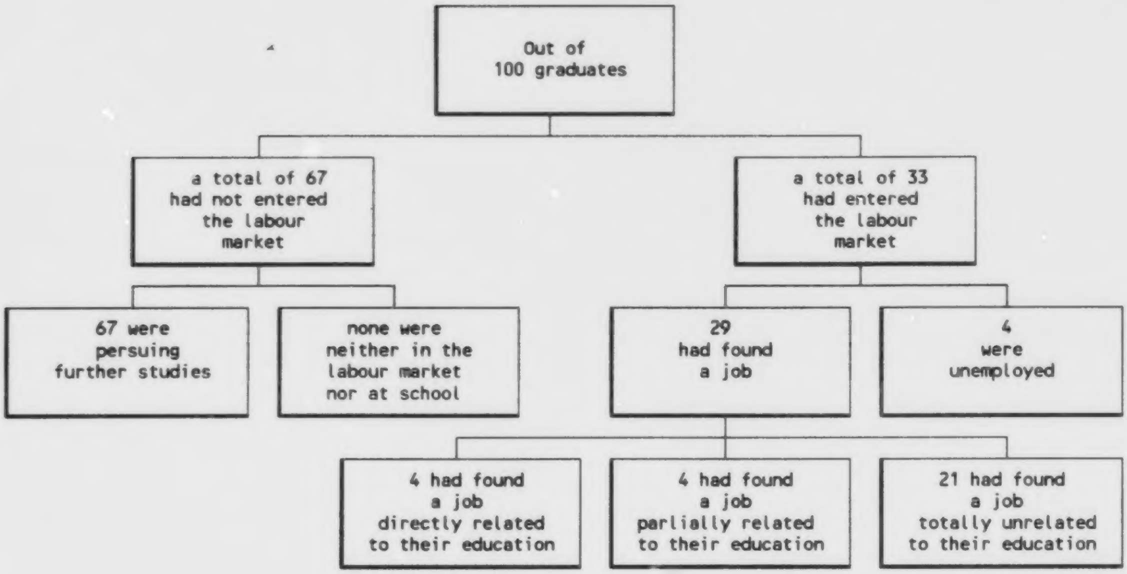
Data on placement in occupations related to this field of study tend to confirm that these graduates enter a more difficult than average labour market. Nonetheless, the situation appeared to improve over the past few years and it is expected that this trend will continue over the next decade when demand will grow more quickly than the number of graduates. Over the next decade, opportunities for entering the labour market should compare to the average.

POLITICAL SCIENCE

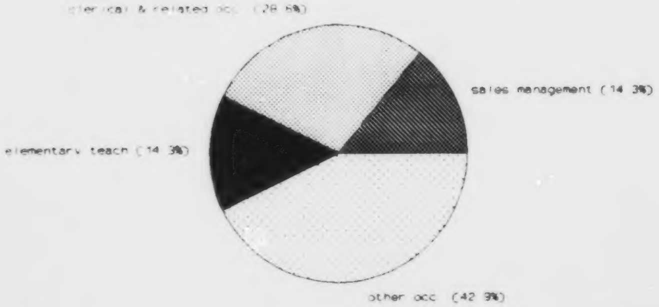
BACHELOR'S DEGREE

SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 67 had not entered the labour market
a total of 33 had entered the labour market
67 were persuing further studies
none were neither in the labour market nor at school
29 had found a job
4 were unemployed
4 had found a job directly related to their education
4 had found a job parlially related to their education
21 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	460	2.1	0.3
1985/90	585	2.4	1.0
1990/95	600	2.3	1.0
1995/2000	600	2.3	0.9

POLITICAL SCIENCE
BACHELOR'S DEGREE

Political science comprises, among other things, the specialized disciplines of comparative politics, international relations, political history and political philosophy. Programs in this discipline are offered at Bishop's, Concordia, Laval, McGill, Montréal, UQAC and UQAM. There is generally no prerequisite other than a Diploma of Collegial Studies.

Trends and projections

After a certain drop in popularity in the early 1980s, the proportion of graduates in this discipline to graduates with bachelor's degrees taken as a whole indicates a return to the level of popularity current in the late 1970s. If the trends of the last few years continue, some 600 persons should graduate in this field of study annually during the period 1990-2000.

Occupation after graduation

According to the 1988 survey of 1986 graduates, a proportion markedly higher than the average were still at school two years after obtaining their degrees. Among those who had decided to enter the labour market, 12% were unemployed, an unemployment rate higher than the 9.5% average for all graduates with bachelor's degrees. Moreover, there was almost no link between job and education for most of those who had found a job.

Occupational profile

The occupational profile of these graduates reflects the very weak link between job and education. The highest occupational concentration was in the administrative support staff category.

General picture

This high unemployment rate and the weak link between occupations pursued by graduates in this discipline and their education illustrate clearly the difficulties facing them in the labour market. Indeed it is one of the most difficult fields of study in labour market terms at the bachelor's level. It is revealing that barely 45% of these graduates said they would make the same choice, compared with nearly 70% for all graduates with bachelor's degrees.

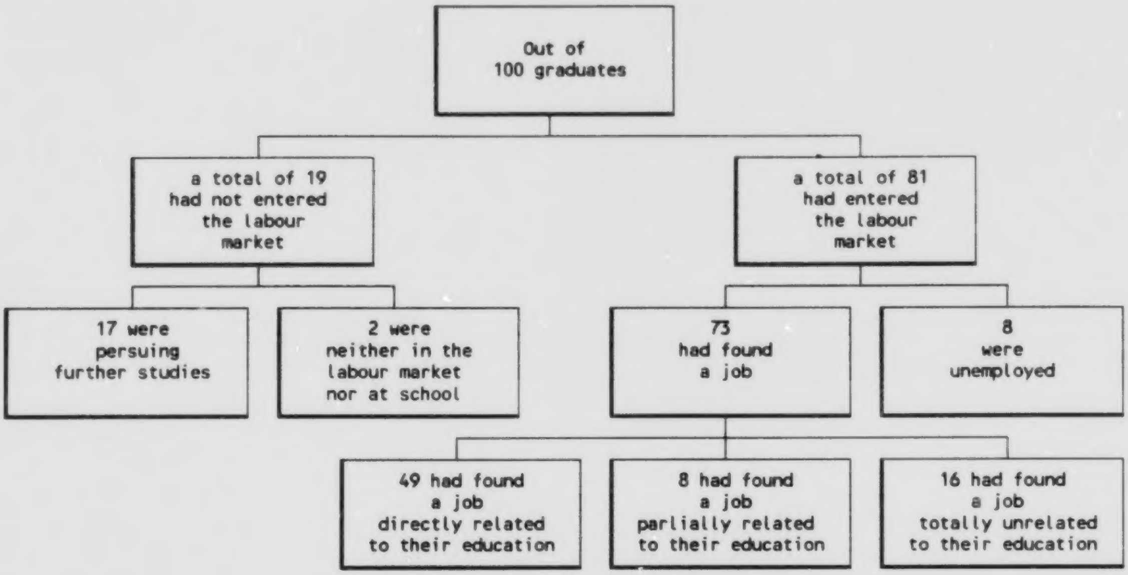
During the 1990s, the prospects of employment growth in the hiring sectors (mainly the public sector) provide little hope that the labour market situation will improve significantly. On the contrary, projected requirements in related occupations point to a slight tightening of labour market entry conditions. These graduates will also have to continue to compete in the labour market against graduates in the social sciences such as sociologists and historians.

SOCIAL SERVICES

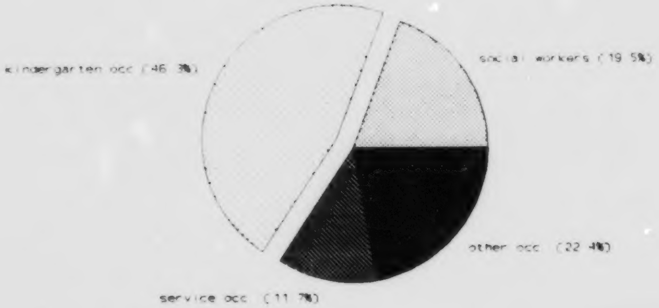
VOCATIONAL COLLEGE DIPLOMA

SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 19 had not entered the labour market
a total of 81 had entered the labour market
17 were persuing further studies
2 were neither in the labour market nor at school
73 had found a job
8 were unemployed
49 had found a job directly related to their education
8 had found a job parlially related to their education
16 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	540	3.7	0.8
1985/90	495	3.5	1.0
1990/95	440	3.5	1.3
1995/2000	455	3.5	1.3

SOCIAL SERVICES
VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses daycare technology, psychosocial research and social work. These programs are available in most Quebec regions, except for psychosocial research technology which is offered at the Rimouski and Rosemont Cegeps and at Collège Mérici.

Trends and projections

During the 1980s, the growth in the number of graduates in these disciplines was the same as that in the vocational college sector taken as a whole. If this trend continues, an average of 450 students will graduate each year during the 1990s.

Occupation after graduation

More than 80% of these graduates, or a proportion comparable to the average, had entered the labour force after completing their studies. About 90% of them had found a job which for the most part was strongly related to their education.

Occupational profile

The jobs that were the most directly related to education were primarily in the category of daycare workers, which accounted for more than 45% of employed graduates. Among the social work technology graduates, the most common related occupational groups were those of social and community workers.

Salary

According to the Relance Survey, the average annual salary of respondents who were working full time one year after graduation was $13,000. This salary level was 25% lower than that of other graduates in the vocational college sector.

General picture

Whereas social work technology graduates were somewhat affected by budget cuts at the various levels of government, daycare workers benefited from the progressive expansion of the daycare network. Overall, the employment outlook for all of these graduates has therefore improved, while remaining more or less comparable to the average.

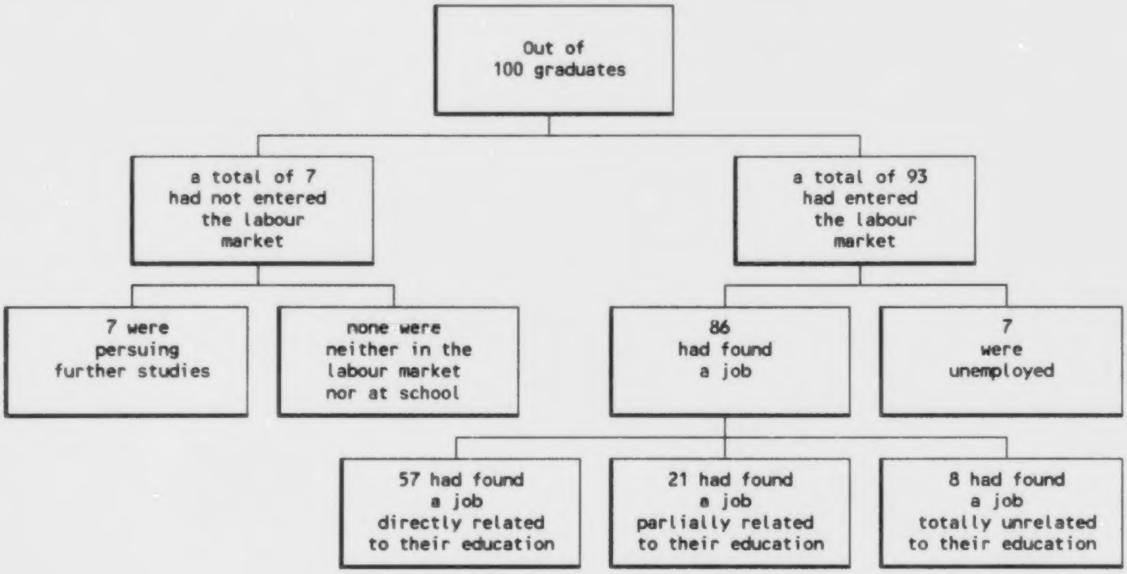
These trends should continue over the 1990s, which will be marked by a notable improvement in market entry opportunities for graduates in daycare technology. The outlook for other social services workers will remain uncertain and will largely depend on the governments' budget priorities.

SOCIAL SERVICES

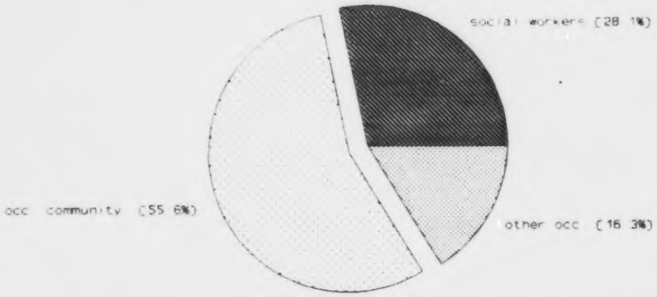
BACHELOR'S DEGREE

SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 7 had not entered the labour market
a total of 93 had entered the labour market
7 were persuing further studies
none were neither in the labour market nor at school
86 had found a job
7 were unemployed
57 had found a job directly related to their education
21 had found a job parlially related to their education
8 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	435	2.0	1.7
1985/90	480	1.9	1.0
1990/95	500	2.0	1.0
1995/2000	500	1.9	1.0

SOCIAL SERVICES
BACHELOR'S DEGREE

Most Quebec universities offer programs in social services or social work. Prerequisites vary depending on university. Courses in statistics, biology and psychology may be required in addition to a Diploma of Collegial Studies.

Trends and projections

The popularity of this discipline has remained constant over the past number of years, while the number of graduates has been maintained at approximately 2% of all graduates with bachelor's degrees. If this percentage remains constant during the 1990s, an average of nearly 500 students will graduate in these disciplines from Quebec institutions annually.

Occupation after graduation

According to the 1988 survey of 1986 graduates, graduates in this discipline showed one of the highest participation rates at the bachelor's level. A placement rate of 92% of graduates in the labour market was also well above the average. Finally, in the opinion of these graduates, more than 90% of their jobs were partially, and more often directly, related to their education.

Occupational profile

The occupational profile of graduates in this field of study was dominated by the occupational group of social workers (28%) and staff in social and community services (56%).

Salary

The average annual salary of survey respondents working full time was $26,500, comparable to the average of graduates with bachelor's degrees taken as a whole.

General picture

Even if indications are that labour market job entry conditions for these graduates declined somewhat in the period 1985-1990 compared with the first half of the 1980s, the recent statistics presented above show clearly that these graduates were facing a labour market appreciably more favourable than for the average graduate with a bachelor's degree. Despite this favourable labour market situation, a lower than average proportion said they would make the same academic choice.

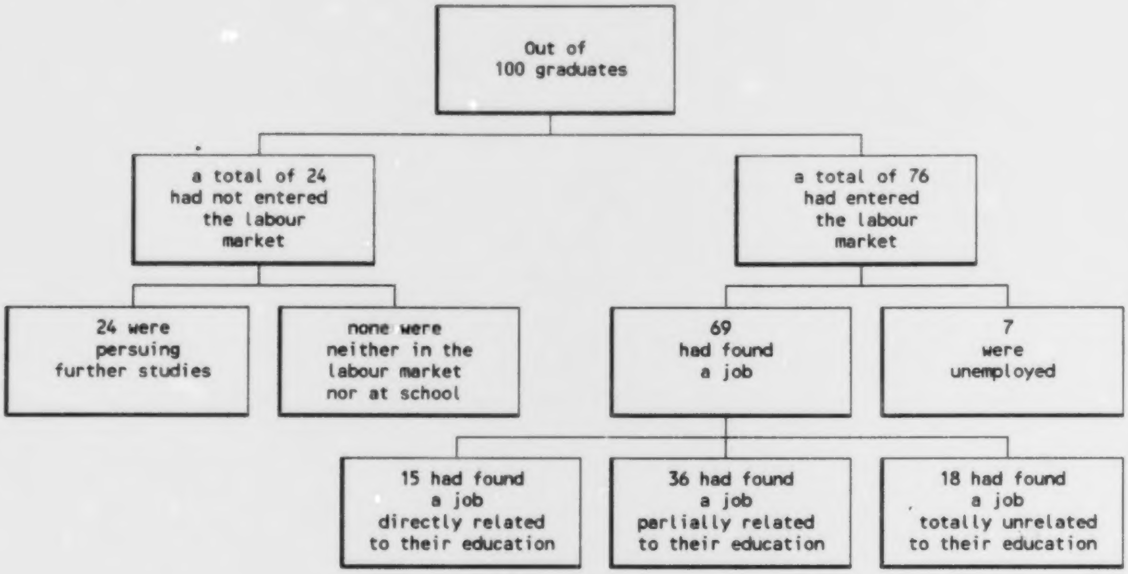
During the coming decade, these graduates should continue to enjoy more or less favourable conditions, since requirements are expected to remain high. We anticipate job entry opportunities comparable to those prevailing over the past few years, while demand will exceed the supply of specialized human resources throughout the 1990s.

SOCIOLOGY

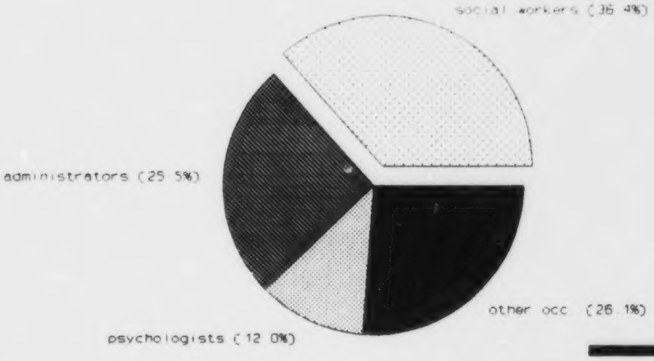
BACHELOR'S DEGREE

SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 24 had not entered the labour market
a total of 76 had entered the labour market
24 were persuing further studies
none were neither in the labour market nor at school
69 had found a job
7 were unemployed
15 had found a job directly related to their education
36 had found a job parlially related to their education
18 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	325	1.5	1.1
1985/90	370	1.5	1.0
1990/95	375	1.5	1.0
1995/2000	400	1.5	1.1

SOCIOLOGY
BACHELOR'S DEGREE

This field of study includes programs in criminology and sociology. A program in criminology is offered at the University of Montréal, while most Quebec universities offer programs in sociology. Mathematics courses are required for admission to criminology. There is no prerequisite for sociology except a Diploma of Collegial Studies or equivalent.

Trends and projections

The popularity of this discipline declined steadily from the late 1970s to the mid-1980s. Since then, the number of graduates has risen slightly to 370 annually. If this proportion remains constant, the number of graduates during the 1990s will be maintained at nearly 400 annually on average.

Occupation after graduation

The participation rate of graduates in these disciplines two years after graduation was comparable to the rate for graduates with bachelor's degrees taken as a whole; the proportion of those who had found jobs was also comparable. The link between job and education was not as close, however. Only 20% of 1986 graduates who were working in 1988 held jobs directly related to their education, compared with 55% for all graduates with bachelor's degrees. Conversely, 25% were working in an unrelated field over against 13% of all graduates.

Occupational profile

Among those with a job two years after graduation, nearly 50% held positions classified in the major group of social sciences occupations. Specifically, social workers accounted for a little more than 35% of jobs. With more than 25% of positions, the group of administrators also accounted for a significant number of jobs.

Salary

The average annual salary of graduates working full time two years after graduation was $25,600. This salary level put these graduates slightly below the average for all graduates with bachelor's degrees, this being $26,600 annually.

General picture

The low rate of placement in occupations related to education did not seem to translate into a greater desire to continue one's education or higher than average difficulty in entering the labour market. Moreover, a higher percentage of these graduates said they would make the same academic choice if they could start their education over again.

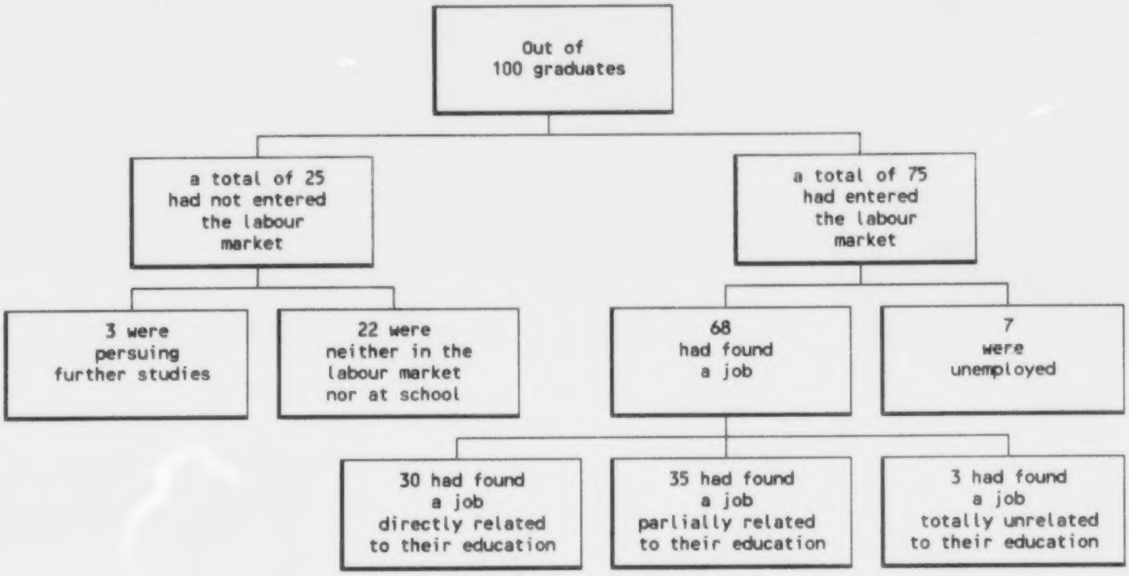
As in the last decade, the chances of finding a job in a related occupation are not expected to improve significantly. These are occupations in which the public and parapublic sectors provide most jobs and thus are especially sensitive to government budget decisions.

SOCIOLOGY

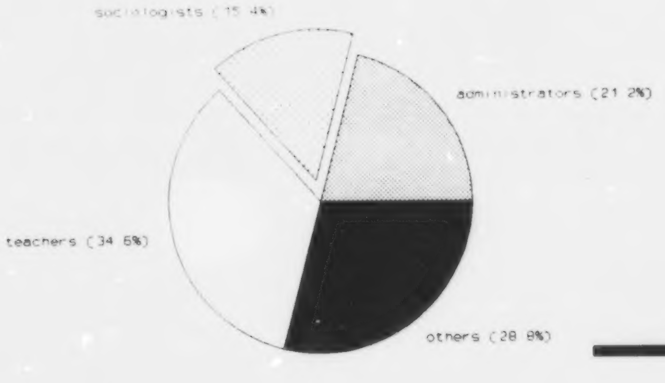
MASTER'S DEGREE AND DOCTORATE

SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 25 had not entered the labour market
a total of 75 had entered the labour market
3 were persuing further studies
22 were neither in the labour market nor at school
68 had found a job
7 were unemployed
30 had found a job directly related to their education
35 had found a job parlially related to their education
3 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	80	1.9	1.7
1985/90	105	2.1	1.0
1990/95	100	2.1	0.8
1995/2000	90	2.1	0.9

SOCIAL SCIENCES

SOCIOLOGY
MASTER'S DEGREE AND DOCTORATE

Concordia, Laval, McGill, Montréal and the University of Quebec at Montreal offer graduate programs in sociology. Criminology programs are also available at the University of Montreal.

Trends and projections

After a drop in the late 1970s and early 1980s, the relative number of graduates with master's degrees or doctorates in sociology bounced back in mid-decade to its level of 2% beginning in 1986. If this proportion holds, approximately 90 to 100 students will earn graduate degrees in sociology each year during the coming decade.

Graduates' labour market participation

According to the survey of graduates, proportionately more graduates in this field of study decided to pursue further studies than graduates in other fields. The unemployment rate of those who had decided to enter the labour market was slightly above average: 8% compared with 6%. The major difference in terms of placement was that these graduates held jobs they considered to be less directly related to their education.

Occupational profile

Since these graduates hold jobs less directly related to their education, their occupational profile was also more varied. A point to note is that barely 15% of graduates were working in the social sciences, compared with 40% of graduates with bachelor's degrees. Teaching accounted for 35% of graduates, while management accounted for 22%.

Salary

The average annual salary of survey respondents working full time was $40,000.

General picture

During the 1980s, labour market entry opportunities declined as the number of graduates increased and the demand in directly related occupations dropped. Graduates were able to compensate for the worsening situation by broadening their occupational range, which meant a weaker link between work and education.

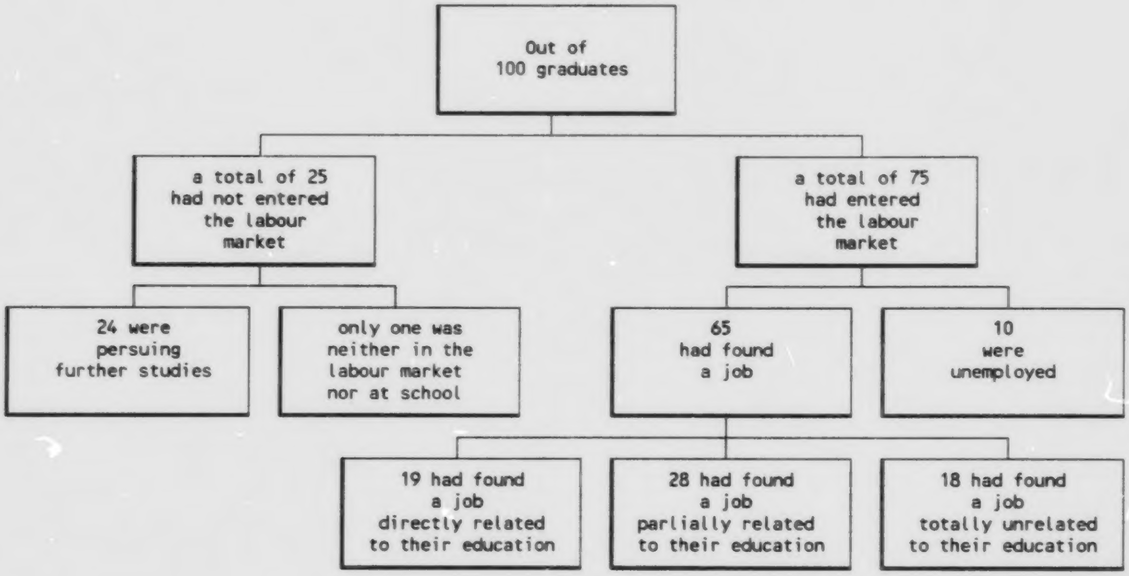
During the coming years, prospects should continue to decline, falling below average, as a result of the anticipated drop in demand. The jobs most directly related to education are expected to bear the brunt of the expected slow employment growth rate in the public and parapublic sectors, where they are concentrated.

SPORT AND RECREATIONAL TECHNOLOGY

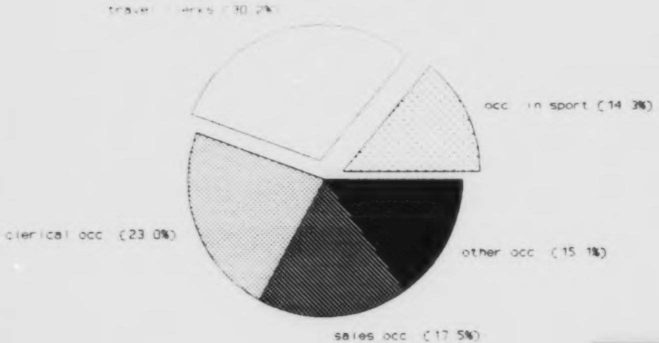
VOCATIONAL COLLEGE DIPLOMA

SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 25
had not entered
the labour
market
a total of 75
had entered
the labour
market
24 were
persuing
further studies
only one was
neither in the
labour market
nor at school
65
had found
a job
10
were
unemployed
19 had found
a job
directly related
to their education
28 had found
a job
parlially related
to their education
18 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	265	1.8	0.9
1985/90	270	1.9	1.0
1990/95	255	2.0	1.6
1995/2000	265	2.0	1.6

SPORT AND RECREATIONAL TECHNOLOGY
VOCATIONAL COLLEGE DIPLOMA

While five Quebec regions out of twelve offer courses specializing in tourism (Lower St. Lawrence, Estrie, Montérégie, Montreal and Quebec City), recreational technology is available in only two regions (Lower St. Lawrence and Montreal).

Trends and projections

During the last decade the number of graduates in these disciplines remained more or less constant around an average of 265 annually. Given the growth in the college population, this number should fall only slightly if it maintains its current relative popularity.

Occupation after graduation

The results of the 1988 Relance Survey showed that these graduates had a higher than average unemployment rate of 13.3%. According to the respondents, the relation between education and work was weaker than average and more often than not indirect. This situation partly explains why a higher than average proportion of graduates opted to continue their studies after graduation.

Occupational profile

Of the occupational groups that are the most closely linked to education and which opened the door to the labour market for these graduates, that of travel agents offered the most opportunities, accounting for 30% of the jobs obtained. For their part, occupations in sports, especially that of coach, accounted for nearly 15% of the positions held. A large proportion of these graduates entered the labour market in occupations less directly related to their education, such as receptionist. Most of the other graduates held positions related to office work or sales.

Salary

The average salary of respondents to the survey who were working full time after graduation was $13,800 annually, a lower salary level than the average for vocational college graduates.

General picture

The main placement, unemployment and salary indicators show that graduates in these disciplines face slightly fewer than average market opportunities. A certain amount of competition from university graduates in physical education and in leisure and recreation also exists for the positions of coach, trainer and instructor in sports and recreation. Graduates in tourism, however, benefited to a greater extent from the development of the tourist infrastructure in the different regions and the proliferation of travel agencies over the last few years. In this respect, the market outlook for tourism graduates have proved more favourable.

An aging population, the growing number of double income households and more flexible work hours that accompany the development of activity services as well as specialized services aimed at target clienteles are factors that will continue to favour the growth of the tourist and recreational infrastructures. It is expected that the need for specialized personnel in this sector will grow more quickly than the number of graduates. The employment outlook for these graduates will thus improve gradually over the next decade.

APPENDIX I

COMPOSITION OF FIELDS OF STUDY
ARTS

FINE ARTS (community college) 16

Plastic arts
Professional music
Popular music
Professional theatre
Acting
Design
Scenic design
Dance and ballet
Ceramics

MUSIC (undergraduate) 18

Music (except teaching)

OTHER PERFORMING ARTS AND FINE ARTS (undergraduate) 20

Art studies (general)
Art appreciation and aesthetics
Fine arts
Painting
Sculpture
Dance
Dramatic arts, theatre

HAIRDRESSING (secondary) 22

Women's hairdressing
Men's hairdressing

ESTHETICS (secondary) 24

Beauty care assistant
Esthetics
Hair removal by electrical means

SEWING AND APPAREL (secondary) 26

Clothing manufacture
Leather making
Garment making, sales and styling
Fashion and clothing
Pattern-making
Fashion design

INTERIOR ARRANGEMENT (secondary) 28

Interior arrangement
Displaying
Interior arrangement displaying

CREATIVE AND DESIGN ARTS (community college) 30

Interior design
Fashion design
Fashion production
Men's clothing technology
Women's clothing technology

PRINTING AND ADVERTISING (secondary) 32

Manual platen press and duplicator
Bookbinding
Independent shop printing
Photocomposition
Photolithography
Offset printing
Commercial drafting

COMMERCIAL AND ADVERTISING ARTS (community college) 36

Window display
Industrial design technology
Fashion merchandising

APPLIED ARTS (undergraduate) 40

Industrial design
Graphic arts
Drafting and design
Engraving
Photography
Lithography
Typography
Ceramics
Jewellery
Fashion design
Interior decorating

PHOTOGRAPHY (secondary) 34

Photography

GRAPHIC AND AUDIO-VISUAL ARTS (community college) 38

Photography
Graphics
Typography
Photocomposition
Photolithography
Printing
Bookbinding (finishing)
Photomechanics, photography

APPENDIX II

COMPOSITION OF FIELDS OF STUDY
EDUCATION

TEACHER TRAINING ELEMENTARY/SECONDARY (undergraduate) 44

Teaching, fine arts
Teaching, commerce
Special education
Teaching, home economics
Teaching, industrial sciences and arts
Music instruction
Sex education
Teaching, hygiene
Religious education
Adult education

TEACHER TRAINING (graduate) 48

Teaching, arts and fine arts
Teaching, commerce
Special education
Teaching, home economics
Teaching, industrial sciences and arts
Music instruction
Sex education
Teaching, hygiene
Religious education
Adult education
Higher education
Teacher training, postsecondary
Teacher training, preschool
School libraries
Educational administration
Educational psychology
Educational counselling
Program development
Test evaluation
Educational technology
Comparative education
Sociology of education
Other education specialties

TEACHER TRAINING, OTHER (undergraduate) 44

Higher education
Teacher training, postsecondary
Teacher training, preschool

NON-TEACHING EDUCATION (undergraduate) 50

School libraries
Educational administration
Educational psychology
Educational counselling
Program development
Test evaluation
Educational technology
Comparative education
Sociology of education
Other education specialities

PHYSICAL EDUCATION (undergraduate) 52

Physical education
Kinesiology
Human kinetics
Anthropokinetics
Recreation
Recreology

EDUCATIONAL AND COUNSELLING SERVICES (community college) 54

Special care counselling

APPENDIX III

COMPOSITION OF FIELDS OF STUDY
COMMERCE, MANAGEMENT AND ADMINISTRATION

COMMERCE (secondary) 58

Auto parts clerk
Sales and distribution of cosmetics
Auxiliary clerk
Professional sales
Merchandising clerk
Accounting clerk
Office clerk
Receptionist/telephone operator
Taxation clerk
Sales clerk
Office clerk

SECRETARIAL ARTS (community college) 62

Secretarial science
Office technology
Medical archives

FINANCIAL MANAGEMENT (community college) 68

Accounting
Finance

OTHER MANAGEMENT SERVICES (community college) 72

Farm management
Farm operation
Farm management and operation
Agricultural management consulting
Personnel
Industrial management
Transportation
Office management

TABLE SERVICE (secondary) 60

Table service

BUSINESS TECHNOLOGIES (secondary) 62

General secretary
Legal secretary
Medical secretary
Stenographer-typist
Secretary
Keypunch operator
Computer operator

BUSINESS ADMINISTRATION (community college) 66

Administration technology
General administration
Administration and cooperation

INSTITUTIONAL MANAGEMENT (community college) 70

Hotel business
Food production and administration

MARKETING (community college) 74

Marketing

COMMERCE AND MANAGEMENT (undergraduate, graduate) 76

Accounting
Finance
Industrial relations
Marketing
Personnel management
Public administration
Health administration
Administration, hotel and food services
Other, special administration

APPENDIX IV

COMPOSITION OF FIELDS OF STUDY
HUMANITIES

ENGLISH (undergraduate) 82

Creative writing

LINGUISTICS, TRANSLATION, INTERPRETATION (undergraduate) 86

Linguistics
Interpretation
Translation

DOCUMENTATION TECHNOLOGY (community college) 90

Documentation technology

LIBRARY SCIENCE 92 (graduate)

Library science
Medical library science
Maintenance of archives
Museology
Administration, art galleries
Museum sciences
Other documentation sciences

HISTORY (undergraduate, graduate) 100

Regional history
Ancient history
Medieval history
Modern history
Other

FRENCH (undergraduate) 84

Creative writing

LANGUAGES AND LITERATURE (graduate) 88
Linguistics
Interpretation
Translation
Classical Studies
Hebrew
Latin
Other languages and literatures
Comparative literature
Medieval languages
Asian languages and/or literature
Slavic languages and/or literature
Other languages and literatures

MASS COMMUNICATIONS (community college) 94

Media arts and technology

MASS COMMUNICATIONS (undergraduate) 96

Filmmaking
Film
Radio and television
Public relations
Journalism

PHILOSOPHY AND RELIGION (undergraduate, graduate) 102
Ancient philosophy
Epistemology
Ethics
History of philosophy
Logic
Comparative religion
Canon law (does not include religious teaching)
Pastoral theology
Practical theology

APPENDIX V

COMPOSITION OF FIELDS OF STUDY
HEALTH AND MEDICINE

DENTISTRY (undergraduate) 108

Dentistry
Oral biology
Oral surgery
Orthodontics
Other specialties in dentistry

BASIC SCIENCES IN MEDICINE (undergraduate) 112

Anatomy
Biochemistry
Biophysics
Embryology
Endocrinology
Genetics
Histology
Neurophysiology
Pharmacology
Physiology
Other basic sciences in medicine

THERAPY (undergraduate) 116

Occupational therapy
Physiotherapy
Other therapy

MEDICINE (doctorate) 110

Medicine

PHARMACY (undergraduate) 114

Medical pharmacy
Pharmaceutics
Pharmaceutical chemistry
Pharmaceutical therapy
Pharmacognosy
Radiopharmacy, nuclear biology
Clinical pharmacy
Hospital pharmacy
Other specialties in pharmacy (except pharmacology)

OTHER HEALTH SCIENCES (undergraduate) 118
Bacteriology
Parasitology
Immunology
Pathology
Other paraclinical sciences
Optometry
Hygiene and community medicine
Health, hygiene and environment
Public health
Preventive medicine
Public health and veterinary sciences
Other, epidemiology and public health
Audiology and speech therapy
Medical laboratory sciences and technology
Radiotechnology
Other, medical laboratory science and technology
Art and medicine
Dental hygiene
Other health related occupations

HEALTH SCIENCES
(graduate) 120

Basic sciences in medicine
Therapy
Specialty in medical surgery

HEALTH SERVICES
(secondary) 122

Nursing assistant
Dental assistant

NURSING SCIENCES
(community college) 124

Nursing
Nursing care

NURSING
(undergraduate) 126

Invalid care
Geriatrics nursing
Nursing:
- Medical-surgical
- Obstetrics
- Remote regions
- Paediatrics
- Psychiatry
- Mental health
- Public health

MEDICAL LABORATORY TECHNOLOGY
(community college) 128

Medical laboratory technology

RADIOLOGY TECHNOLOGY
(community college) 130

Diagnostic radiology
Nuclear medicine technology
Radiotherapy

DENTAL ASSISTANT TECHNOLOGY
(community college) 132

Dental technology
Dental hygiene

OTHER DIAGNOSTIC AND TREATMENT TECHNOLOGIES
(community college) 134

Medical technology
Respiratory technology
Rehabilitation technology

MEDICAL EQUIPMENT TECHNOLOGY
(community college) 136

Denturology
Ortheses and prostheses
Visual ortheses
Hearing prostheses

OTHER HEALTH TECHNOLOGIES
(community college) 138

Dietetics
Cytotechnology
Electrophysiology technology
Public health

APPENDIX VI

COMPOSITION OF FIELDS OF STUDY
APPLIED SCIENCES

CARPENTRY (secondary) 142

Carpentry (construction)
Woodworking (construction)

WOODWORKING (secondary) 146

Shop carpenter
Prefabrication carpenter
Layout carpenter

CIVIL ENGINEERING TECHNOLOGY (community college) 150

Civil engineering technology

TECHNICAL DRAFTING (secondary) 156

General drafting
Mechanical drafting
Architectural and structural drafting
Surveying operator (topography)
Building equipment drafting

ARCHITECTURAL AND BUILDING TECHNOLOGY (community college) 160

Building and public works technology
Building mechanical systems
Construction cost estimation and realty appraisal technologies
Marine technology - naval architecture
Welding

ELECTRICITY (secondary) 144

Construction electrician
Industrial wiring maintenance electrician
Electrical drafting estimator
Assembly of wiring installations

PLUMBING AND HEATING (secondary) 148

Plumbing and heating helper
Pipefitter
Plumbing and heating mechanic
Installers and mechanics of air-conditioning and refrigeration units
Refrigeration worker

CIVIL ENGINEERING (undergraduate, graduate) 152

Civil engineering

ARCHITECTURAL DRAFTING TECHNOLOGY (community college) 158

Architectural technology

ARCHITECTURE (undergraduate) 162

Architecture (except regional and urban planning)

OFFICE MACHINE ELECTRONICS (secondary) 164

Electrotechnical appliances servicing
Electronic home appliances servicing
Installation/repairs of telecommunications equipment
Home appliances electromechanics
Vending machines electromechanics
Telecommunications operator
Installation electrician
Security systems electromechanics
Office machine mechanics
Office machine electromechanics

ELECTRICAL ENGINEERING (undergraduate, graduate) 172

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job futures

AN OCCUPATIONAL OUTLOOK FOR THE '90s

QUEBEC

(AUSSI DISPONIBLE EN FRANÇAIS SUR DEMANDE)

JOB FUTURES - QUEBEC
AN OCCUPATIONAL OUTLOOK FOR THE 1990s
QUEBEC

VOLUME II:
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SOCIAL ECONOMICS STUDIES DIVISION

EMPLOYMENT AND IMMIGRATION CANADA

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PREFACE

Technological progress greatly affects both the way in which the duties and skills associated with various occupations are modified and the nature and volume of the labour demand. The acceleration of technological change over the past few years has made it more difficult for individuals to choose from among all the different career opportunities available to them. Moreover, these changes have brought to the fore the adaptation problems faced by a labour force with outdated skills and has given rise to more pressing concerns on the part of companies about human resources planning.

In order to respond to the growing need for information on the anticipated employment growth in the various occupations, the Strategic Planning Branch of EIC - Quebec is pleased to present the second edition of *Job Futures - Quebec*.

This publication comprises two volumes. The first presents statistics on school graduates and describes their situation on the labour market, particularly with respect to placement rate, type of job, salary, and medium- and long-term employment outlook.

Unlike the previous version, this edition covers all the vocational training sectors, namely the secondary and college vocational sectors and the three university levels. More than 130 fields of training from these three sectors are analyzed.

The second volume deals with the expected employment growth in the labour market by occupation for the 1990-2000 forecast period and in the labour supply for the same period. Volume II also gives a detailed account of the conditions for practising these occupations, the technological, technical and organizational changes affecting them, complementary training leading to their practice and the skills and aptitudes needed by graduates to compete effectively on the labour market.

It is my hope that you will find this publication a useful source of information that will assist you in your decision-making. Finally, any comments sent to us on the content or format of the document will be taken into account in the next edition.

J. Leblanc

Jacques Leblanc
Director
Strategic Planning Branch
Employment and Immigration Canada
Quebec Region

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INTRODUCTION

Choosing an occupation or changing careers gives rise to a number of questions, particularly in today's economic context. Will there be enough job openings during the 1990s in the chosen occupation? Will there be a lot of competition? What occupations can I get into with my education and acquired skills? What will employers' needs be? What technological changes will affect occupations? What impact will these changes have on the skills in demand and on the tasks? What consequences will they have on the training required? **JOB FUTURES QUEBEC, Volume II, "OCCUPATIONS"** will help in finding answers to these questions.

JOB FUTURES QUEBEC, Volume II, contains valuable information to help you make a career choice and to identify the training needed to attain your goals. **JOB FUTURES QUEBEC II** provides job outlooks up to the year 2000 for nearly 200 different occupations. The forecast period is from 1990 to 2000, with 1989 as the base year. For each of these occupations, **JOB FUTURES II** provides forecasts for the number of job openings on the labour market in line with the expected trends in the Quebec economy. Forecasts are also given of the number of unemployed workers and graduates at three educational levels (secondary, community college and university). Each occupation is analysed according to projected labour market trends, highlighting the skills that will improve the chances for employment, the impact of technological change on the tasks performed and the main aptitudes sought on the labour market. Information on education, salaries and industrial sectors providing employment round out the analysis and provide a global picture of trends in the occupation.

JOB FUTURES QUEBEC II helps young people in school, people who are seeking a career change and those who are returning to the labour market to make career choices while developing realistic expectations about the job market.

JOB FUTURES QUEBEC, VOLUME II: OCCUPATIONS

JOB FUTURES II is organized by occupation. Each occupation is identified according to a title and a code (1), for example, bookkeeper and accounting clerk "4131". The code always has four digits, e.g. 4131, 1131, etc. The first two digits represent the major occupational group to which the occupation belongs, and the next two digits designate the specific occupation. For example, 41 corresponds to administrative personnel and related workers, and thus 4131 designates the positions of bookkeeper and accounting clerk while 4111 corresponds to secretaries. **JOB FUTURES QUEBEC II** covers nearly 200 of these 4-digit occupational groups. Each of these 4-digit groups includes a certain number of occupations. Hence, the bookkeepers' and accounting clerks' group includes payroll clerks, accountant assistants, cost clerks, etc. In **JOB FUTURES QUEBEC II**, under each of the occupational titles with a 4-digit code, a list of the main occupations in that group is given. The statistics generally apply to the overall occupational group designated in the title. However, the data for an overall group may not apply to each of the member occupations. Thus, a comment applying to restorers of works of art may not necessarily apply to restorers of paintings, even though both occupations are part of the same occupational group of library, museum and archive technicians. In **JOB FUTURES QUEBEC II**, a qualitative analysis of numerous data sources complements the statistical analysis by occupational group. This approach makes it possible to comment on particular occupations within the group.

---

(1) **NOTE:** The titles and code numbers are those used by Statistics Canada in the Census and the Labour Force Survey. They come from the Standard Occupational Classification which closely resembles the Canadian Classification and Dictionary of Occupations (CCDO), with some variations in occupational groupings. Users of the CCDO will feel at home with this classification.

DEFINITIONS :

THIS OCCUPATION OR THIS OCCUPATIONAL GROUP: Refers to the occupational group(s) indicated at the top of the page.

OCCUPATIONS TAKEN AS A WHOLE: All the occupations on the labour market, including those that are not included in JOB FUTURES QUEBEC. This section makes it possible to compare individual occupations to the average for occupations taken as a whole.

STATE OF THE LABOUR MARKET: Refers to the number of projected job openings for this occupational group during the 1990s up to the year 2000 and the number of persons who should be able to find jobs in this occupational group.

JOB OPENINGS: Workers are hired to fill new positions and openings due to attrition. This category gives the total number of job openings forecast for each occupational group, between 1989 and the year 2000. It includes jobs created as a result of economic growth and attrition. It does not reflect the number of positions left vacant because of persons moving to another occupational group (occupational mobility).

NEW JOB OPENINGS: The total number of jobs created between 1989 and the year 2000. This number corresponds to projected job openings due to economic growth.

JOBS IN 1989: Refers to the number of persons practising a particular occupation in 1989.

JOBS IN THE YEAR 2000: Refers to the forecast number of jobs that will be available in the year 2000. This number includes jobs created as a result of economic growth as well as existing jobs.

CHANGES 1989-2000: The total number of jobs created between 1989 and the year 2000. It is calculated by subtracting the number of jobs in 1989 from the number of jobs forecast for the year 2000. This number corresponds to job openings expected as a result of economic growth.

JOB OPENINGS DUE TO ATTRITION: The number of job openings resulting from attrition. This information does not take into account persons who leave the occupation to practise another. The terms replacement needs and attrition are considered equivalents.

TOTAL JOB OPENINGS 1989-2000: This total corresponds to the sum of new job openings and openings due to attrition.

LABOUR SUPPLY: These data correspond to the number of persons who should be entering a given occupation. It includes the number of unemployed persons in 1989 and the projected number of graduates at the three educational levels from 1989 to the year 2000. They do not include the return to the labour market of persons who had left, persons who left their occupation for this particular occupation (occuational mobility), persons from other countries or regions outside Quebec (immigration) or persons in the military sector.

ESTIMATED UNEMPLOYMENT IN 1989: These estimates apply to the number of unemployed persons in the occupation. Our hypothesis is that these unemployed persons should all, between 1989 and the end of the forecast period, return to the labour market in this same occupation.

SECONDARY SCHOOL, COMMUNITY COLLEGE AND UNIVERSITY GRADUATES 1989-2000: Refers to the number of graduates entering the labour market in this particular occupation. This number includes graduates of various study programs who are likely to find a job in the occupation. The graduates are divided into secondary school, community college and university educational levels. In the statistical tables the figures are replaced by --- when the data are either unavailable, unreliable for statistical reasons or if not enough graduates are expected to take up the occupation.

OTHER IMPORTANT REQUIREMENTS: A comment is included when a determining factor affects the occupation.

MAIN CHARACTERISTICS (%): This heading provides data on distribution by sex, age and job status. The data are drawn from the 1981 and 1986 censuses. The results are given as percentages of the total number of workers in the occupation in 1981 or in 1986.

ACCORDING TO SEX: Statistics from the 1981 and 1986 censuses give the distribution of persons in the occupation by sex.

ACCORDING TO AGE: Statistics are drawn from the 1981 census. Data from the 1986 census were not available to us at the time this volume was being prepared. The results are expressed as a percentage of the total number of workers in the occupation in 1981.

FULL-TIME, PART-TIME: The number of persons who, in the 1981 and 1986 censuses stated they were working either full time or part time in the occupational group. Results are expressed as a percentage of the total number of workers in the occupation.

MAIN SECTORS PROVIDING EMPLOYMENT (1986 %): These are the industrial sectors employing the largest number of persons in a particular occupational group. Each of these sectors is then divided into the sub-sectors that are most representative of the employment concentration of the occupational group. The percentages express the proportion of jobs in a sector or subsector at the time of the 1986 census. The overall industrial sectors include some 60 sectors of activity such as agriculture, mining, manufacturing, trade, administration, etc.

LABOUR MARKET TRENDS: This heading deals with labour market conditions for the occupational group and factors that may affect these conditions. The forecast employment growth rate is compared to that of the occupations taken as a whole. An average growth rate of 1.28% is expected between now and the year 2000. The analysis also highlights technological factors and their impact on the number of workers and on their tasks. Demographic, organizational and other factors affecting the occupation are also taken into consideration. The analysis focuses in particular on the skills that are in demand on the market and the aptitudes to develop that could become assets for those seeking to enter the occupation.

EDUCATION AND SKILLS: This heading gives an overview of the training normally required to enter the occupation.

SALARY: This heading contains information on salaries. The data come mainly from the 1986 census. The figures represent the average salary earned by workers in the occupation who were working full time.

LINKS WITH JOB FUTURES QUEBEC - VOLUME I : "FIELDS OF STUDY"

This volume was designed to be used in conjunction with Volume I. **JOB FUTURES QUEBEC I** gives the situation on the labour market of graduates of occupational training disciplines, one or two years after their graduation, for each educational level (secondary vocational, community college vocational and university). It provides information on the occupations in which the graduates of a particular discipline found jobs, the proportion of these graduates who did not find jobs, etc. From a given field of training in **JOB FUTURES I**, the occupations in which the graduates found jobs can be identified. In this volume the data for the occupations represent a slice in time and indicate the situation in previous years. Then readers can consult Volume II to get an idea of the outlook for these occupations.

Volume I includes the placement outlook for graduates by field of training. An occupation may be found in several fields of training. It is interesting to look up the hiring outlook for this occupation in **JOB FUTURES II** and then to compare the job prospects in Volume I for graduates taken as a whole in the fields of study concerned by this occupation.

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GOVERNMENT INSPECTORS AND REGULATORY OFFICERS 1116

Examples: Customs Inspector, Immigration Inspector, Human Rights Commission Officer, Rent Officer, Health Standards Inspector, Fisheries Inspector, Fire Inspector

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
8,400	11,390	2,990	2,630	5,620

LABOUR SUPPLY

ESTIMATED UNEMPLOYED	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY
160	-	25	390	575

OTHER IMPORTANT REQUIREMENTS

Canadian citizenship.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	17.6	19.1	Under 25 years	-	-	Full-time	-	98.2
Males	82.4	80.9	Over 54 years	-	-	Part-time	-	1.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Service (100)
- Federal Service (42)
- Provincial Service (34)
- Local Gov't Service (22)

4. LABOUR MARKET TRENDS

Employment in this occupational group should grow at a rate greater than that forecast for all occupations taken in general and for management occupations in particular. It encompasses a very wide variety of occupations, almost all of which are concentrated in government service. Despite government budget constraints, employment is likely to continue to increase under pressure from the public, whose concerns about health and safety are growing. According to estimates, between now and 2000, approximately 5,600 inspectors will be needed to fill positions left vacant by attrition and created by expected economic growth.

5. EDUCATION AND SKILLS

Most government inspectors and regulatory officers have a post-secondary education (a DEC or a law course or one on safety standards at a CEGEP). Both the kinds of occupations involved and the areas of training are varied. For

5. EDUCATION AND SKILLS (cont'd)

positions as building inspectors, for example, a Diploma of Collegial Studies (DEC) in civil engineering, industrial health and safety is usually required. Candidates must pass public service examinations. For positions related to safety, a DEC in prevention, civil engineering technology or industrial operations gives an advantage. For positions as animal primary products inspectors, a DEC in food technology, quality control and development or production, and an apprenticeship booklet or qualification certificate are required. For positions as health standards inspectors, a DEC in food technology or dietetics gives an advantage, while positions as fisheries inspectors require a DEC in fish products processing. For positions in meat and dairy product control and as meat and slaughterhouse inspectors, a university degree in veterinary medicine is an asset.

A secondary course in fire prevention is required for positions as fire prevention inspectors. An Attestation of College Studies in prevention technology may also provide access to these occupations. A driver's licence and membership in a union are required. Candidates must also pass a medical examination.

A DEC in transportation provides access to positions as customs officers. A university degree in administration is an asset, however. A university degree in social sciences or administration provides easier access to jobs as immigration officers. Knowledge of a foreign language, in addition to both official languages, is an important asset.

Inspectors must be willing to undergo on-the-job training including examinations and sometimes certification (e.g. public health services inspector). Government inspectors must have a good knowledge of the sector for which they are responsible, including the regulations governing operations and technologies used. For most positions candidates must be Canadian citizens.

Several of these occupations require frequent travel and variable hours or shift work.

6. SALARY

Salaries vary from one government organization (municipal, provincial, federal) to another. According to the Canadian Institute of Public Health Inspectors, salaries in Canada range from $25,000 to $33,000. According to the 1986 census, the average salary in Quebec was $31,436.

GENERAL MANAGERS AND OTHER SENIOR OFFICIALS 1130

Examples: General Sales and Advertising Manager, Managing Director, Division Manager, Executive Director, Education Chief Executive, Hospital Administrator, Finance General Manager

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
49,750	59,840	10,090	15,980	26,070

LABOUR SUPPLY

ESTIMATED UNEMPLOYED	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY
120	-	-	1,285	1,405

OTHER IMPORTANT REQUIREMENTS

Job mobility is a major source of labour.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	5.3	15.0	Under 25 years	1.3	-	Full-time	-	97.6
Males	94.7	85.0	Over 54 years	20.6	-	Part-time	-	2.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Trade (9)
Business Service (8)
Banks and Insurers (7)
Gov't Service (7)

4. LABOUR MARKET TRENDS

The growth rate of employment in these occupations should be slightly above average. There are nearly 50,000 general managers and administrators in Quebec, making up the third largest group of administrators in the province. These professionals work at a senior managerial or administrative level, almost always for a company but sometimes for themselves (approximately 6% in 1986). There is little unemployment in these occupations. Competition, however, is expected to remain strong. In addition to recent graduates and estimated unemployed, a significant supply of labour comes from job mobility. One becomes a senior manager after climbing the rungs of the occupational ladder over several years of work and experience in related technical and occupational fields. Competition will come mainly from employees already in an organization and only rarely from recent graduates. An aptitude for ongoing training favours access to senior positions. The average age in this occupation is quite high (about 45 in 1986 for Canada as a whole), and therefore competition for positions as senior managers and administrators can be expected to intensify as the labour force ages and the number of qualified, experienced candidates for such positions grows. Technological development could have an impact on demand for these occupations. Automatic data processing and robotics affect the nature of the duties to be performed and could reduce the number of management levels in organizations and as a consequence the number of general managers.

5. EDUCATION AND SKILLS

A university degree in public administration is often required for general managerial positions in education. In the health care field, a bachelor's degree in administration may provide access to general managerial positions, but a master's in public administration is desirable. People with bachelor's degrees in health care or social sciences may enrol in a master's in public administration. A bachelor's degree with an honours in finance is an asset for general managers in financial institutions. For people in sales and advertising, a university program in marketing is desirable.

Employers favour experience in an industrial field comparable with their own. Generally, a university degree, or, on occasion, a DEC in administration is required of new employees. Although not yet a necessary requirement for entry into these occupations, knowledge of management software is increasingly in demand. Familiarity with computers and ability to interpret printouts are assets. Leadership, communication skills and versatility are sought-after qualifications. Knowledge of English is desirable.

6. SALARY

According to the 1986 census, the average salary of general managers and other senior officials working full time was $49,170.

MANAGEMENT OCCUPATIONS, NATURAL SCIENCES AND ENGINEERING 1131

Examples: Manager Data Processing and Systems Analysis, Manager Engineering, Manager Life Science Program, Manager Mathematical Service

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,170	3,155	985	500	1,485

LABOUR SUPPLY

ESTIMATED UNEMPLOYED	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY
45	-	-	95	150

OTHER IMPORTANT REQUIREMENTS

Job mobility is a major source of labour.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	4.2	10.4	Under 25 years	3.5	-	Full-time	-	98.7
Males	95.8	89.6	Over 54 years	14.5	-	Part-time	-	1.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Business Services (14)
- Computer Services (4)
- Scientific Studies and Services (6)

Gov't Service (10)
- Federal Service (3)
- Provincial Service (4)
- Local Gov't Service (3)

Transportation and Communications (10)
- Railway Transport (2)
- Telephone (4)
- Radio Broadcasting (2)
- Telephone (2)

Manufacturing Industries (13)
- Energy Wire and Cable Industry (7)
- Aircraft Industry (2)
- Pulp and Paper (2)
- Machinery (2)

4. LABOUR MARKET TRENDS

The growth rate of employment in these occupations should be above average. Although the labour market is favourable, competition for positions could remain keen, because in addition to recent graduates and the unemployed, a significant supply of labour comes from job mobility. Most managerial positions are held by professionals who are nearing the end of their careers in scientific and technical fields, natural sciences and engineering. Job prospects for data processing and systems analysis managers and administrators are among the best in this occupational group. Two positive factors are improving trends in these occupations: the generalized use of computers in all firms, and the diversification of operations affected by computerization in any one firm (as regards management: accounting, finance, payroll and operations, and as regards production: computer-aided design

4. LABOUR MARKET TRENDS (cont'd)

and manufacturing). As management software takes hold, new functions are created within organizations. In-house user services are developed to help staff use existing software and data bases and to advise management on what to purchase. This in turn increases the demand for these professionals. The demand for administrators in engineering and architecture is related to the level of capital expenditure. Continued investment in the hydro-electric sector, a boost to road and institutional work over much of the forecast period could stimulate demand for these occupations and compensate for the slowdown in residential and commercial construction. The gradual completion of Quebec's water treatment program will mean a leveling off of demand for water treatment management positions.

5. EDUCATION AND SKILLS

Several years' experience is required before rising to these positions. New administrators enter the labour market at the junior or intermediate level before moving onto senior management occupations in the natural sciences and engineering. Employers look for new employees with a general knowledge of micro-computers, the possibilities offered by informatics, its vocabulary, basic computer programming and the principal software packages. Experience in specialized fields and technologies is in demand. Most employees in these positions have university degrees in science and technology, engineering and applied sciences, mathematics or physics.

For these management occupations, knowledge of computerized systems is an asset and knowledge of English is often required.

6. SALARY

According to the 1986 census, the average salary in Quebec of managers in the natural sciences and engineering working full time was $47,930.

MANAGEMENT OCCUPATIONS, SOCIAL SCIENCES AND RELATED FIELDS 1132

Examples: Museum Director, Social Work Director, Communeuty Center Director

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,520	2,955	435	800	1,235

LABOUR SUPPLY

ESTIMATED UNEMPLOYED	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
40	-	-	180	320

OTHER IMPORTANT REQUIREMENTS

Job mobility is a major source of labour.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	49.9	53.5	Under 25 years	9.5	-	Full-time	97.6	95.1
Males	50.1	46.5	Over 54 years	12.3	-	Part-time	4.9	4.9

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Services (39)
- Hospitals (4)
- Other Health Care Institutions (35)

Education and Related Sciences (14)
Elem. and Sec. Schools (2)
Universities and Colleges (3)
Libraries and Museums (9)

Gov't Service (17)
- Other Federal Service (5)
- Provincial Service (7)
- Local Gov't Service (5)

4. LABOUR MARKET TRENDS

The growth rate of employment in these occupations should be slightly above average. It is difficult for recent graduates to obtain managerial positions immediately; such positions usually require several years' experience. Social services are still sensitive to government spending policy. As the Quebec population ages, increased demand for homes and residences is creating jobs in social services management. On the other hand, factors such as the completion of the CLSC network in Quebec and anticipated budget constraints are expected to reduce the growth rate of employment in these occupations.

The recent trend toward the establishment of new museums and art galleries is expected to continue over the next few years, creating job opportunities for museum and art gallery directors. Because fewer funds are available and competition for those funds among various cultural organizations is increasing, the administrative, marketing and development duties of museum and art gallery directors are taking on greater importance. Economic trends favour the hiring of administrators with experience in fundraising campaigns, marketing and finance. There is pressure to seek candidates with degrees in administration rather than professionals with experience in museums. Small

4. LABOUR MARKET TREND (cont'd)

museums look for administrators with a general background, whereas larger institutions seek specialists as well. People starting out and wanting to gain experience in this field will likely have to work part time or even on contract. In museums and art galleries, part-time work and contracting out have increased steadily over the past few years. Volunteer work is also a means of entering this labour market.

5. EDUCATION AND SKILLS

Social services directors are usually required to have a bachelor's degree in social sciences, biology or one of the administration disciplines. Museum and art gallery directors generally have to have 5 to 10 years' experience in museology, in particular as a curator with supervisory experience. A bachelor's degree, and often a higher degree, is required. Skills in project team management, marketing, fundraising campaigns, public relations, advertising, new technologies and computer languages are in demand. Library directors must have a master's degree in library and information sciences. Positions as archives directors generally require a master's degree in history. Library directors generally have to have four to six years' experience as librarians with supervision, while archives directors must have five to six years' experience as archivists or historical researcher.

In general, people who wish to become directors in social sciences must have good organization and management skills and be familiar with the activities of their organization. They must be able to communicate effectively, establish good relations with people in various milieux and assess human, financial and material resources.

6. SALARY

According to the 1986 census, the average salary of managers and administrators working full time in the social sciences in Quebec was $33,560. In 1987, the salary of librarians working for the federal government and in charge of small or medium-sized specialized libraries varied between $31,551 and $36,987; those in charge of complex, medium-sized libraries earned between $34,450 and $43,350; while chief librarians in charge of large, specialized libraries earned between $38,820 and $47,460.

ADMINISTRATORS IN TEACHING AND RELATED FIELDS 1133

Examples: Superintendent of Program, College or University Registrar

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
8,020	7,220	800	1,865	1,065

LABOUR SUPPLY

ESTIMATED UNEMPLOYED	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
70	-	-	1,190	1,260

OTHER IMPORTANT REQUIREMENTS

Teaching experience is necessary.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	27.1	31.4	Under 25 years	1.2	-	Full-time	98.2	98.3
Males	72.9	68.6	Over 54 years	11.8	-	Part-time	1.8	1.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Education (87)
- Elem. and Sec. Schools (62)
- Post-Secondary Education (University) (8)
- Universities and Colleges (17)

Gov't Service (3)
- Provincial Service (3)

4. LABOUR MARKET TRENDS

Forecasts indicate that this occupational group will face a reduction in volume of employment. The approximately 1,000 positions that will open up in this field in the labour market will result from attrition. Recent graduates from the education system do not have easy access to positions as administrators and directors, since relevant teaching experience is required. Competition among teachers for these positions is keen.

The number of administrators in education is very sensitive to demographic fluctuations. Hiring depends on the number of students enrolled, number of teaching positions and funds allotted to education by the federal and provincial governments. Enrolment in elementary schools is expected to decline between now and 2000. This will reduce the demand for elementary school administrators. At the secondary school level, the number of students should increase gradually as a result of the prior baby boom and the new vocational training policies, which extend the training period for a vocational diploma.

5. EDUCATION AND SKILLS

Most of these positions require a university degree. Positions as school principals require a professional licence or certificate. Candidates must have a teaching licence from the Department of Education and have successfully completed two years' probation to obtain a permanent teaching certificate. They must have at least eight years' teaching experience.

Oral communication skills, the ability to work as a member of a team and a capacity for organization and planning are assets.

6. SALARY

According to the 1986 census, the average salary of administrators in teaching and related fields working full time was $43,280.

ADMINISTRATORS IN MEDICINE AND HEALTH

1134

Examples: Chief Dietician, Nursing Services Director, Clinic Director, First-Aid Director

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
3,830	4,590	760	1,205	1,965

LABOUR SUPPLY

ESTIMATED UNEMPLOYED	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
40	30	-	70	140

OTHER IMPORTANT REQUIREMENTS

These positions require several years' experience.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	44.0	51.2	Under 25 years	1.4	-	Full-time	96.8	96.0
Males	56.0	48.8	Over 54 years	14.4	-	Part-time	3.2	4.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Services (90)
- Hospitals (57)
- Other Health Care Institutions (26)
- Testing and Health Care Services n.e.c. (5)
- Physicians' Offices (2)

4. LABOUR MARKET TRENDS

According to forecasts, employment should grow at a slightly above average rate. Most of these positions require several years' experience. Economic slowdown generally has little effect on these occupations, but they are sensitive to government spending policy. The best job prospects are in institutions other than hospitals, including rehabilitation centres, chronic care facilities, public health institutions and social services centres. New technologies have made it possible to create new programs such as day surgery, home care and outpatient clinics. Increased demand for people to manage such services could result. If, however, the new fee policies, according to which doctors working in hospitals will be given an advantage over doctors in private practice, are implemented, the number of doctors wishing to practice in a hospital setting could increase, leading to more positions for medical and health care administrators in hospitals. As demand and costs of health care services grow, there is a growing trend toward hospitals calling on health care services management firms or administrators on contract, and this could lead to job opportunities in these firms.

4. LABOUR MARKET TRENDS (cont'd)

Technological changes have had an impact on health care, in terms of both management and medical equipment. Knowledge of centralized finance systems and computerized systems is increasingly useful to administrators.

5. EDUCATION AND SKILLS

To become a director of dietetics, a person must have a bachelor's degree in dietetics or nutrition, five years' related experience in administration and mem[illegible] in the Corporation professionnelle des diététistes du Québec. Nurses with an honours bachelor's degree or postgraduate courses in nursing sciences have a better chance of obtaining administrative and supervisory positions. The current trend is to hire people with a bachelor's or master's in nursing sciences who have taken courses in administration. A minimum of 7 to 10 years' experience in nursing is required for such positions, including 3 to 5 years in a supervisory positions such as head nurse. Candidates must also be members of the Fédération des infirmières et des infirmiers du Québec.

In general, for health care administrators, skills in labour relations, collective bargaining, and negotiating with other governmental and community institutions are valuable assets.

6. SALARY

According to the 1986 census, the average salary of health care administrators in Quebec was $42,180.

FINANCIAL MANAGEMENT OCCUPATIONS 1135

Examples: Bank Manager, Loan and Credit Manager, Financial Controller, Local Savings and Credit Union Manager, Vice-President for Finance, Treasurer

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
15,630	18,400	2,770	2,890	5,660

LABOUR SUPPLY

ESTIMATED UNEMPLOYED	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY
245	-	-	400	645

OTHER IMPORTANT REQUIREMENTS

Job mobility is a major source of labour.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	21.0	29.8	Under 25 years	5.3	-	Full-time	48.3	98.4
Males	79.0	70.2	Over 54 years	8.4	-	Part-time	51.7	1.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Finance, Insurance, Real Estate (65)
- Banks and other Deposit Accepting Institutions (54)
- Other Credit Organizations (3)
- Investment Companies (1)
- Insurers (4)
- Real Estate and Insurance Agents (3)

Gov't Service (4)
- Other Federal Service (1)
- Provincial Service (1)
- Local Gov't Service (2)

Business Services (1)
- Management Consulting Services (1)

4. LABOUR MARKET TRENDS

Employment in this occupational group should grow at a rate slightly above the average for all occupations in Quebec taken as a whole. As with most management positions, these are attained through promotion after several years' related work experience. Graduates must therefore acquire a minimum of experience before rising to these positions, and realize that they will be in competition with people already in the field. The world of finance has undergone major changes over the past two decades as a result of such factors as deregulation, demographic trends and technological changes. The deregulation of the financial sector, which allows banks to engage in insurance activities and vice versa insurers to offer financial products, tends to increase the demand for finance managers. In order to deal with the resultant intensified competition, banks have broadened the range of products (various kinds of savings and chequing accounts, multi-term loans...) and services (automated tellers) offered to their customers. Some institutions specialize in one or another of these services, while others offer them all. The growing complexity of such products and of the financial markets in general is stimulating the demand for finance managers.

Because of the diversification of products and services, staff of financial institutions are increasingly called upon to act as financial consultants for investors and individuals. Finance managers are specializing more and more in the design, marketing, and sale of new financial products and putting less emphasis in the traditional

4. LABOUR MARKET TRENDS (cont'd)

administrative roles. Training is becoming very important for access to positions as finance manager, since most financial products require increasingly specialized knowledge. Demographic factors have an effect on both the duties of and the demand for finance managers. The aging of Quebec's population, which creates greater needs as regards pension funds and various savings instruments and fewer needs for mortgages, has an impact on the type of financial activities carried out. The influx of women into the labour market has meant that there are more people with basic accounts and credit cards. There are more customers to be served, and consequently the demand for finance managers is growing.

The financial sector has been greatly affected by technological changes. For example, the computerization of accounting has brought about major changes in the role of comptrollers, who used to organize and control accounting operations now done by new accounting software. Increasingly, young finance managers will have to become familiar with the computerized systems in their particular fields. More and more, senior managers will have to accept and promote micro-computers and help staff adjust to them. Computerization means that incoming finance managers must possess a whole new stock of knowledge.

Accounting software has changed the work of bank branch managers. From duties drawing on their great accounting expertise, they are moving toward responsibility for administrative staff, promotion, transfers and hiring, and marketing financial services.

5. EDUCATION AND SKILLS

For positions as bank managers, general familiarity with accounting operations is a basic requirement for junior managers. Knowledge of computerized accounting systems in banking and other fields is essential. Graduates must be willing to take in-service training and work in the various departments of the branch before rising to the position of branch manager. This generally takes three to four years. In-service training and computerization of accounting have made it easier for graduates to enter banking.

Increasingly banks are hiring university graduates and now require at the least a college diploma. New employees generally have a higher level of education than was required previously.

Beginners in the field of finance would be well-advised to prepare for the decompartmentalization of financial services, which brings with it a new approach centred more on the consumer. Specialization in consumer needs and corporate and individual savings management can facilitate access to these occupations. At the same time, an overview of financial services, gained through reading the financial pages of the newspapers, for example, is an asset for young beginners. Practical experience with several financial products is an important tool for enhancing marketable knowledge and competitive position. Managing finances should help develop expertise in the fields of operations strategy.

Oral communication skills is a basic requirement. The ability to express oneself in both French and English is becoming very important, especially as management consulting activities become more prevalent.

6. SALARY

According to the 1986 census, the average salary in financial management occupations was $37,800.

PERSONNEL AND INDUSTRIAL RELATIONS MANAGEMENT OCCUPATIONS 1136

Examples: Industrial-Relations Manager, Personnel Manager, Personnel-Training and Development Manager

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
13,475	19,085	5,610	3,175	8,785

LABOUR SUPPLY

ESTIMATED UNEMPLOYED	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY
180	-	-	615	795

OTHER IMPORTANT REQUIREMENTS

A university degree is increasingly required.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	26.4	33.1	Under 25 years	6.1	-	Full-time	97.7	98.4
Males	73.6	66.9	Over 54 years	10.8	-	Part-time	2.3	1.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Service (14)
- Other Federal Service (5)
- Provincial Service (5)
- Local Gov't Service (4)

Services (13)
- Hospitals (4)
- Other Health Care Institutions (3)
- Other Recreational Services (2)
- Business Services (1)
- Restaurants (3)

Finance and Insurance (7)
- Banks (5)
- Insurers (2)

Trans., Comm., Other (6)
- Railway Transport (1)
- Telephone Systems (3)
- Electrical Power Systems (2)

Retail Trade (6)
- Food Stores (2)
- General Retail Merchandising (4)

Other (2)
- Paper Industry (1)
- Trade Contracting (1)

4. LABOUR MARKET TRENDS

Employment in this occupational group should grow at an above average rate. Major transformations are currently taking place in labour relations, where participative management is becoming more widespread. Labour relations issues are giving ground to problems of communication, motivation and employee involvement. These occupations are undergoing major changes. Human resources management services are broadening and expanding their areas of expertise. Several firms have created positions as vice-president for human resources. New jobs are opening up as human resources consultant agencies specializing in training, recruitment and industrial engineering expand. Technological changes have created new human resources management requirements: industrial engineering and career

4. LABOUR MARKET TRENDS (cont'd)

paths within organizations are not quite what they used to be. The need for human resources training is being recognized in several industries. All these factors could lead to increased demand for administrators and change the requirements for such positions.

5. EDUCATION AND SKILLS

Almost all positions as personnel and industrial relations administrators and managers require a university degree in administration or industrial relations. Some positions require a master's degree in industrial psychology. Knowledge of English and mobility are assets. Computer systems are increasingly used in performing personnel administration duties. Basic knowledge of existing software in fields of activity related to these occupations is becoming increasingly important.

6. SALARY

According to the 1986 census, the average salary of personnel and industrial relations administrators and managers was $35,000. Bonuses may increase basic salary by 15 to 25%.

SALES AND ADVERTISING MANAGEMENT OCCUPATIONS 1137

Examples: Advertising Manager, Public Relations Director, Sales Manager

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
63,480	85,865	22,385	15,305	37,690

LABOUR SUPPLY

ESTIMATED UNEMPLOYED	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY
835	-	-	8,820	9,655

OTHER IMPORTANT REQUIREMENTS

Job mobility is a major source of labour.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	18.6	28.5	Under 25 years	8.0	-	Full-time	97.1	97.1
Males	81.4	71.5	Over 54 years	11.4	-	Part-time	2.9	2.9

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Retail Trade (55)
- Food Stores (14)
- General Merchandise Stores (6)
- Automobile Dealers (4)
- Shoe Stores (3)
- Women's Clothing Stores (5)
- Men's Clothing Stores (4)
- Furniture Stores (4)
- Other Retail Stores n.e.c. (7)

Wholesale Trade (10)
- Food (2)
- Motor Vehicle (1)
- Electrical Machinery, Equipment and Supplies (2)
- Machinery and Equipment (2)
- Lumber and Building Materials (1)
- Wholesalers n.e.c. (2)

4. LABOUR MARKET TRENDS

Growth of employment in sales and advertising management occupations should be above average. As with most managerial positions, these are generally not open to junior employees. In view of the favourable outlook in the trade industries, demand for these occupations can be expected to grow, especially since they are concentrated in the wholesale and retail trade. The services and manufacturing sectors also offer job opportunities, which could increase in the coming years. The new trend of firms toward integrating public relations functions into management could boost demand for people in these occupations.

Over the past few years the advertising industry in Quebec has experienced a decline; several clients have reduced their advertising budgets. In order to deal with this situation, several medium-sized agencies have had to merge.

4. LABOUR MARKET TRENDS (cont'd)

There has also been a diversification of services. In addition to the traditional services of creating advertisements and commercials and choosing media, agencies now offer such services as documentary research, promotion, direct advertising, graphic design and public relations. Some large agencies offer all these services, while others, mainly small ones, are highly specialized. Knowledge of these new advertising activities is an asset for administrators wishing to work in this field. New clients are coming to the fore: health and social service organizations, professional corporations, lawyers' offices, the stock market; and this is creating administrative positions in advertising and sales.

Increased computerization of the trade sector (computerized stock control, computerized sales and advertising records) means new knowledge is required in these occupations. Experience in both sales and marketing, rather than solely in personnel management as gained in a production manager position, for example, is increasingly in demand.

5. EDUCATION AND SKILLS

For some positions, a CEGEP diploma in administration technology is required. More often a university degree in administration and marketing is a qualification. Experience in sales, management and marketing is generally sought. For managerial positions in sales of technical products, specialized knowledge is a valuable asset. Oral communication skills makes obtaining these positions easier. Knowledge of English is necessary in the Montreal region and for positions in large and medium-sized firms.

6. SALARY

According to the 1986 census, the average salary of an advertising or sales manager was $28,900. Because of the wide range of qualifications and duties, it is difficult to establish a representative salary scale. In Canada in 1986, according to Thorne, Stevenson and Kellogg, the annual salary of advertising and sales promotion managers was between $23,600 and $66,000, the average being $39,400; sales and branch managers earned $36,100. Commissions and bonuses must be added to these figures.

PURCHASING MANAGEMENT OCCUPATIONS 1141

Examples: Marchandise Purchasing Manager, Building Supplies Purchasing Manager

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,170	2,520	350	485	835

LABOUR SUPPLY

ESTIMATED UNEMPLOYED	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY
60	-	60	540	660

OTHER IMPORTANT REQUIREMENTS

Job mobility is a major source of labour.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	14.9	18.3	Under 25 years	4.0	-	Full-time	98.3	99.1
Males	85.1	81.8	Over 54 years	15.0	-	Part-time	1.7	0.9

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Wholesale Trade (10)
- Food (2)
- Electrical Machinery, Equipment and Supplies (2)
- Machinery and Equipment n.e.c. (2)
- Lumber and Building Materials (2)
- Wholesalers n.e.c. (2)

Government Service (6)

Retail Trade (8)
- Food Stores (4)
- General Merchandise Stores (2)
- Women's Clothing Stores (2)

Chemical and Chemical Products (3)
- Toilet Preparations (1)
- Other Products (2)
- Plastic Manufactured Products (2)
- Pulp and Paper Plants (2)

Social, Cultural, Commercial and Personal Services (8)
- Universities and Colleges (2)
- Hospitals (2)
- Camping Grounds (4)

Other (6)
- Trade Contracting (2)
- Telephone Systems (2)
- Electrical Power (2)

4. LABOUR MARKET TRENDS

The growth rate of employment in these occupations is expected to be average. These positions require several years' experience. Recent graduates rarely move into a sales manager position immediately.

Technological changes could have a positive impact on the demand for people in these occupations. As administrative duties such as stock control and bookkeeping become computerized, information needs grow and become more complex, and the expertise of purchasing managers becomes increasingly sought-after. Their duties are

4. LABOUR MARKET TRENDS (cont'd)

changing, moving more toward purchase forecasting and medium- and long-term planning. In terms of skills in demand, the emphasis will be on negotiating with suppliers. Job opportunities will be greater for people with computer skills and an ability to maintain good interpersonal relations.

5. EDUCATION AND SKILLS

These positions are reached by climbing the rungs of the ladder from clerk to assistant buyer, to buyer, to purchasing manager. However, most people entering these occupations have a bachelor's degree in administration or a CEGEP diploma. In large and specialized firms, purchasing managers must have broad technical knowledge in their field. Knowledge of English is a major asset. The ability to work as a member of a team and a sense of co-operation and dialogue are other desirable qualities.

6. SALARY

According to the 1986 census, the average salary of purchasing managers was $33,450.

SERVICES MANAGEMENT OCCUPATIONS 1142

Examples: Hotel Manager, Landry and Dry Cleaning Area Manager, Janitorial Services Branch Manager

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
15,240	20,635	5,395	3,800	9,195

LABOUR SUPPLY

ESTIMATED UNEMPLOYED	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY
95	-	-	2,570	2,675

OTHER IMPORTANT REQUIREMENTS

Job mobility is a major source of labour.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	18.7	33.0	Under 25 years	8.0	-	Full-time	95.3	94.4
Males	81.3	67.0	Over 54 years	13.1	-	Part-time	4.7	5.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Social, Cultural, Commercial and Personal Services (99)
- Accommodation and Food and Beverage (54)
- Hotel, Motel (15)
- Unions (5)
- Other (25)

Insurance Agencies and Real Estate Industry (1)
- Real Estate Operators (1)

4. LABOUR MARKET TRENDS

According to forecasts, the growth rate of employment in these occupations will be above average, given the expected growth in the hotel business and various other services. As with most managerial positions, these generally require several years' experience. Job mobility is a major source of labour. Openings for managers are closely linked to the accommodation and food and beverage sectors, where prospects seem favourable. Despite some negative factors such as a slower population growth rate and the aging of the population, the combined effect of several other factors will support the growth of these industries. Modern families with fewer children and single people tend to eat out more often and travel more. Greater labour market participation by women and higher household incomes have had a positive effect on demand for these services, thereby increasing demand for managers in these fields.

The higher level of education among the population and the growing number of older consumers is diversifying demand; for example, there is a trend toward health foods in restaurants and a cosier atmosphere in accommodation.

4. LABOUR MARKET TRENDS (cont'd)

The opening of new types of restaurants and accommodation should provide new job opportunities in these occupations. Although to varying degrees in different establishments, several functions related to the hotel and restaurant businesses are now computerized: reservations, accounting, room service, billing, stock control and meal preparation. While management duties have been transformed by this, the effect of the new technologies has been minimal on senior management. However, knowledge of computerized systems is an asset for people starting out in the field.

5. EDUCATION AND SKILLS

In small accommodation and restaurant establishments, the owners usually manage the business. Generally in hotel and restaurant management, the basic requirement is a DEC in hotel or food and beverage administration with three to four years' related experience, or a secondary school diploma with ten or so years' experience. Knowledge of English is a major asset. Those who can adjust easily to the computerized systems used in the industry have a competitive advantage. The ability to read financial statements, draw up budgets and follow daily bookkeeping are also assets. Good interpersonal skills are in demand. Being able to adjust to long working hours and variable schedules is necessary. Mobility may often be required.

Several programs offer training in the hotel and restaurant businesses. At the university level, UQAM offers a three-year program in tourism management, McGill University a bachelor of commerce with specialization in food service administration, and ITHQ a master's of science and technology in hotel and tourism management. McGill and Concordia offer undergraduate and graduate certificates. At the college level, Lasalle and ITHQ offer training in hotel management technology. Champlain, Granby, Lasalle, Matane and Merici colleges and ITHQ give courses in food service management and tourism technology.

6. SALARY

The average annual salary of hotel managers varies greatly depending on the size of the hotel and the importance of the position. According to Renard International Consultants Ltd, in 1986 in Canada, a general manager of a hotel could earn on average between $34,000 and $50,000, depending on the number of rooms; a room manager, between $26,000 and $28,000.

PRODUCTION MANAGEMENT OCCUPATIONS 1143

Examples: Industrial and Manufacturing Production Manager, Food and Beverage Production Manager, Oil and Gas Production Manager

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
15,490	18,030	2,540	3,820	6,360

LABOUR SUPPLY

ESTIMATED UNEMPLOYED	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
300	-	10	1,220	1,530

OTHER IMPORTANT REQUIREMENTS

Technical and management skills are in demand.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	9.2	12.0	Under 25 years	4.0	-	Full-time	99.2	98.3
Males	90.8	88.0	Over 54 years	13.0	-	Part-time	0.8	1.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Other Industries (24)
- Plastic Manufactured Products (2)
- Other Textile Products (2)
- Stamped, Pressed and Coated Metal Products (2)
- Pulp and Paper Plant (4)
- Commercial Printing (3)
- Smelting and Refining (1)
- Aircraft and Parts (2)
- Telecommunications Equipment(3)
- Other Manufacturing Industries (2)
- Trade Contracting (2)
- Machinery and Equipment Wholesalers (1)

Clothing Industry (8)
- Men's Clothing (2)
- Women's Clothing (4)
- Other Clothing Industries (2)

Food and Beverage (5)
- Dairy Products (2)
- Other Food Industries (2)
- Beverage Industry (1)

Machinery Industries (4)
- Other Machinery and Equipment (2)
- Office and Business Machine Industries (1)

Chemicals and Chemical Products (4)
- Pharmaceutical and Medicine Industry (1)
- Toilet Preparations (1)
- Other Chemical Products (2)

Wood Industries (3)
- Sawmill (1)
- Sash, Door and Other Millwork Industries (2)

4. LABOUR MARKET TRENDS

According to forecasts, the employment growth rate of this occupational group should be about average, given the expected growth in the manufacturing sector. A person usually rises to a position as production manager after several years' experience, not at the beginning of his or her career.

Computerization of production processes may change the organization of production and, as a result, the oversight

4. LABOUR MARKET TRENDS (cont'd)

duties performed by production managers. All plants are not affected in the same way by new technologies, and the reorganization of work resulting from the introduction of the same technology varies from place to place. In several firms, traditional equipment is used alongside new computerized equipment. In such cases, the actual organization of production is changed little by the use of numerically control machine tools (NCMT). The impact of technological changes on management functions varies greatly. In general, as a result of computerized management, modified or new work relations between employees and management are emerging. With NCMT, several people with different trades (mechanics, electricians, programmers) share the same work station. There are changes in the role of production managers and the skills they require. Skills in mechanics and electronics, hydraulics, programmed controls and co-ordination of the various computerized subsystems are in demand. In addition to these technical qualifications, management skills such as production planning, business sense and general managerial know-how give an advantage. A good capacity for working as a member of a team, supervising operational staff who are at a higher level, and providing training for new technologies increases one's chances of obtaining these positions.

5. EDUCATION AND SKILLS

At present there is no specific educational requirement, although a secondary school diploma and post-secondary training (bachelor's in engineering or financial administration) are considered assets. Knowledge of computerized systems as applied to production is necessary. Managerial, supervisory and communications skills are in demand. Knowledge of English is important.

6. SALARY

According to the 1986 census, the average salary of production manager was $35,770. According to the 1988 National Survey, 1986 university graduates working in these occupations were earning $29,772 on average.

MANAGEMENT OCCUPATIONS, CONSTRUCTION OPERATIONS 1145

Examples: Construction Manager, Construction Superintendant

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,930	2,910	- 20	800	780

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
220	-	-	530	750

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	1.4	4.2	Under 25 years	3.0	-	Full-time	98.8	97.0
Males	98.6	95.8	Over 54 years	17.5	-	Part-time	1.2	3.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Construction Industry (68)
- Building Construction (36)
- Highway, Bridge and Street Construction (4)
- Other Construction (6)
- Special-trade Contractors (22)

Business Services (7)
- Scientific Studies and Services (7)

Gov't Service (5)
- Provincial Service (2)
- Local Gov't Service (3)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a below-average rate. Given the outlook for the construction sector, construction managers and administrators may see a decrease in their numbers. Nonetheless, forecasts indicate that some 800 additional managers will be needed to fill job openings created by attrition. Employment opportunities for construction managers and the level of construction activity are linked to economic growth. It is expected that over the next few years the demand for new residential buildings will decrease and the demand for commercial buildings will slow down, whereas home renovations will progressively increase. The undertaking of large construction projects in the areas of aluminum works and hydroelectric power as well as the upsurge in road works and institutional construction projects should maintain construction activity. Nevertheless, the water purification sector is entering a period of decline owing to the completion of the Quebec water purification program.

5. EDUCATION AND SKILLS

Generally speaking, good administrative skills and the ability to work with members of other occupational groups are assets. Candidates who have studied management and have a knowledge of engineering as well as experience have an advantage. Knowledge of computerized stock control, material requirements planning, control of work under way and construction accounting is an asset.

6. SALARY

According to the 1986 census, the average salary of construction managers and administrators was $40,684. Salary varies according to experience, the complexity of the duties and the scope and location of the project. For large projects within Canada, in 1987, construction managers earned between $60,000 and $75,000 annually, while for small projects annual salaries varied from $40,000 to $50,000. Project coordinators earned between $30,000 and $50,000, and site superintendents earned $50,00 or more.

MANAGEMENT OCCUPATIONS, TRANSPORT AND COMMUNICATIONS OPERATIONS 1147

Examples: Trucking Company Manager, Radio Station and Television Station Manager, Airline Manager, Traffic Manager, Flight Director, Port Engineer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
4,895	5,510	615	1,040	1,655

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
790	-	-	-	790

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	14.0	19.0	Under 25 years	3.7	-	Full-time	-	98.6
Males	86.0	81.0	Over 54 years	15.3	-	Part-time	-	1.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation (44)
- Air Transport (1)
- Air Transport Serv. (1)
- Railway Transport (9)
- Water Transport Serv. (1)
- Other Truck Transport (12)
- Urban Transit Systems (1)
- Misc. Transport Serv. (3)
- Other Transportation (3)

Communications (29)
- Radio and Television Broadcasting (5)
- Telephone Systems (23)
- Telegraph and Cable Systems (1)

Gov't Service (4)
- Other Federal Service (2)
- Provincial Service (2)

4. LABOUR MARKET TRENDS

Given the growth forecast for the transportation and communications sectors, employment is expected to increase at a below-average rate. People generally enter management occupations in these fields after several years of experience and often after acquiring on-the-job training.

Deregulation of the trucking industry has resulted in a wave of company mergers and the disappearance of smaller companies. This trend should continue at a slower rate than in past years. Moreover, transport companies are becoming increasingly specialized to the detriment of transportation in general and this trend should be more pronounced on the labour market. The nature of transportation is becoming more homogeneous, thus making it easier to assimilate new technologies related to the computerization of transport management and the automation of storage systems, which should accelerate over the next few years. Knowledge of these new technologies is an asset for truck transport managers.

4. LABOUR MARKET TRENDS (cont'd)

The changes resulting from deregulation have spurred the demand for marketing and sales managers. Transporters' increased freedom to offer services to a larger number of destinations may create employment opportunities for managers. However, such prospects may remain quite limited, given that in the trucking industry there is generally one supervisory position for every ten truck drivers' jobs.

As demographic, social and cultural trends are making it increasingly difficult to recruit qualified drivers, the requirements of the road transport industry are shifting towards personnel recruitment and training and give priority to candidates with experience in human resources management.

Administrators in the area of railway transport are facing a staff reduction policy owing to the decrease in user volume and competition from other means of transportation. In addition, the impact of technological changes has had the effect of reducing staff in a number of occupations. The combined effect of technological progress and personnel cuts reduces the prospects for administrative and management jobs.

Air transportation is sensitive to the economic situation. The slowdown in activities, exacerbated by the rise in oil prices, has led to the suspension of some routes and staff reductions. The demand for administrators in the field should be limited over the next few years.

The stagnation of advertising markets and budget cuts in radio and television stations have made employment opportunities difficult for administrators in this area. The appearance of new competitors has opened up the market in past years. Moreover, the fragmentation of the listenership, the decrease in advertising revenues and the increase in production costs raise the threat of personnel cuts and decrease the demand for administrators. The telephone sector will be affected by the numerous technological innovations in the field. The modernization of the telephone system, the potential decompartmentalization of the cable distribution industry and telecommunications companies should increase competition. The downward trend in the number of management positions in telephone companies should continue.

5. EDUCATION AND SKILLS

Given the variety of occupations, it is difficult to specify which skills are required for a position as transportation and communications manager. These occupations may be accessed in a number of ways. Transportation managers must be familiar with the new technologies in the industry in which they are working. Transportation management requires personnel who are qualified in administration, human resources, sales systems and marketing. Good communication and language skills are assets.

For road transport operation managers, a university education in business administration is an asset. An adequate amount of experience in transport may supplement education.

6. SALARY

According to the 1986 census, the average salary of transportation and communications managers was $41,292.

ACCOUNTANTS, AUDITORS AND OTHER FINANCIAL OFFICERS 1171

Examples: Chartered Accountant, Cost Accountant, Industrial Accountant, Tax Analyst, Mortgage Consultant, Insurance Underwriter

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
50,395	59,620	9,225	12,780	22,005

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
1,300	-	-	22,600	23,900

OTHER IMPORTANT REQUIREMENTS

A master's degree in computer science is required.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	29.6	40.9	Under 25 years	4.4	-	Full-time	96.5	94.8
Males	70.4	59.1	Over 54 years	10.4	-	Part-time	3.5	5.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Business Services (26)
- Accounting Serv. (20)
- Management Cons. Serv. (2)
- Other Services (4)

Finance, Ins., Real Estate (16)
- Finance (11)
- Insurance (3)
- Insurance and Real Estate (2)

Gov't Service (11)
- Other Federal Serv. (4)
- Provincial Serv. (6)
- Local Gov't Serv. (1)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate. It will take some time, however, for the economy to absorb the large number of new graduates. Traditional accounting functions are being affected by a number of factors. The computerization of accounting data and the emergence of specialized software packages specifically designed for auditing, data analysis and taxation are among the most important of these factors. These new technologies are considerably changing the skills required of accountants. The shift is increasingly away from basic information recording towards analysis and consulting. The duties of accountants are becoming more diversified, ie from accounting and auditing, their duties are now more centred on taxation and financial management. Accounting firms are increasingly offering consulting services. Computer technology is giving rise to new areas of specialization, such as accountants with expertise in computer science whose main duties include the development and refinement of electronic accounting systems and data analysis and interpretation. Computer consulting offers good opportunities for the future. The demand for accountants specializing in traditional accounting and auditing appears to have levelled off. The demand is now greater for accountants who specialize in electronic systems and in accounting for certain economic sectors. Mastery of computer technology is becoming increasingly necessary for accountants. Another factor is the decompartmentalization of financial intermediaries following the merging of financial institutions. The possibility for each category of intermediaries to sell a range of financial products opens employment opportunities for accountants as financial consultants. Rapid development in the financial consulting function can be expected. Accounting firms are increasingly offering financial planning services. At present, it is not necessary to be an accountant in order to act as financial consultant to individuals or companies, but accounting skills are an asset.

4. LABOUR MARKET TRENDS (cont'd)

Accountants are tending to provide comprehensive consulting on financial questions. Even auditing tasks are expanding to include management auditing which enables accountants to evaluate strategic decisions made by companies in such varied fields as computer science, human resources and investment policies.

A third factor which will affect this occupational group is the opening up of new markets related to the Canada-U.S. Free Trade Agreement and to other potential agreements with other countries. Advanced knowledge of the American economy and of investment regulations, subsidies, exports, taxation and international marketing will be assets for accountants. Amendments to the legislation on the Canadian taxation system should spur demand for accounting skills.

As their financial needs grow and the range of financial instruments becomes more complex, companies are increasingly in need of expertise in the areas of finance and taxation. Taxation is becoming an important factor in the financial strategy of companies. The demand for experts in this area is growing and provides good opportunities for accountants.

5. EDUCATION AND SKILLS

It is becoming necessary for chartered accountants to keep abreast of new technologies in the field. In addition to finance and accounting, a knowledge of marketing, labour relations and quantitative management methods are assets. The emergence of new needs in the design of computer systems, financial analysis, personal finance planning, company mergers and acquisitions and the American economy in relation to the Free Trade Agreement provides opportunities for accountants who have a knowledge of these areas.

Knowledge of computerized systems related to accounting duties is essential for accountants. Bilingualism is an asset. New prospects are opening up for accountants in computer-assisted audit techniques, research, sales tax and international taxation. Comprehensive auditing is expanding to include other consulting services.

There are three types of accountants belonging to three distinct institutions and whose training is quite different. Chartered accountants (CA) specialize in tax and financial consulting, estate planning, accounting and auditing. Students wishing to become chartered accountants must complete a bachelor's degree in business administration and pass the exam administered by the Institute of Chartered Accountants. A chartered accountant certificate is issued to accounting students after two years of on-the-job training with a company.

The Certified General Accountant (CGA) is mainly involved in tax planning, auditing and accounting systems consulting. To become a CGA, candidates must have a bachelor's degree in business administration, pass four mandatory examinations in accounting, finance, auditing and taxation, and complete a training period with a company.

Certified management accountants (CMA), formerly known as Registered Industrial Accountants (RIA), are employed by companies and governments and provide managers with guidance in their decision-making. A bachelor's degree is not necessary to become a CMA. Candidates must take three exams on management accounting, financial accounting and the preparation of a case study. A two-year training period completes the CMA's training.

6. SALARY

According to the 1986 census, the average salary of accountants, auditors and other financial officers was $29,330. Financial consultants may work on a fee or commission basis. According to the 1988 National Graduate Survey, the average salary of respondents two years after graduation was $23,697.

PERSONNEL AND RELATED OFFICERS 1174

Examples: Labour Relations Specialist, Employment Counsellor, Staff Training Officer, Labour Relations Representative, Job and Wage Analyst, Staffing Officer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
8,925	10,470	1,545	1,870	3,415

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
455	-	-	2,430	2,885

OTHER IMPORTANT REQUIREMENTS

Employee training and development duties are expected to increase.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	42.0	51.3	Under 25 years	10.7	-	Full-time	-	96.0
Males	58.0	48.7	Over 54 years	8.9	-	Part-time	-	4.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Service (53)
- Other Federal Service (31)
- Provincial Service (19)
- Local Gov't Service (3)

Financial Industries (6)
- Banks (4)
- Insurance Carriers (2)

Business Services (6)
- Employment Agencies and Personnel Suppliers (4)
- Management and Business Consulting Serv. (1)
- Misc. Services to Business Management (1)

Community Services (8)
- Elem. and Sec. Schools (2)
- Colleges and Universities (1)
- Hospitals (3)
- Other Health Care Inst. (2)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an average rate. The implementation of more comprehensive and advanced resource planning systems in the industry should spur demand for these professionals. Employee motivation, participation and training become priorities for the development of human resources.

With the introduction of new business technologies and the growing emphasis being placed on employee motivation, employee training and development should assume increasing importance in the personnel officer's duties.

4. LABOUR MARKET TRENDS (cont'd)

Personnel management requirements are shifting towards improved employee motivation, productivity and ability to adapt to change. Labour relations are changing. Participative management is being practised by a number of companies. The ability to communicate and to practise participative management is an asset for human resources managers. The ability to make decisions based on a consensus, the ability to exercise managerial functions outside certain classic constraints are assets for staff officers.

Managerial and supervisory skills are sought. Knowledge of computer applications in personnel management is an asset.

5. EDUCATION AND SKILLS

Although there are no specific requirements for this occupation, graduates with a bachelor's degree in industrial relations or business administration have an advantage.

6. SALARY

According to the 1986 census, the average salary of labour officers was $31,000. The National Graduate Survey conducted two years after respondents had completed their studies showed that those employed as staff officers earned an average of $26,980 in 1988.

PURCHASING OFFICERS AND BUYERS, EXCEPT WHOLESALE AND RETAIL TRADE 1175

Examples: Hotel/Restaurant Purchasing Officer, Tobacco/Vegetable/Livestock Buyer, Television-time Buyer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
5,920	8,200	2,280	1,630	3,910

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
160	-	-	100	260

OTHER IMPORTANT REQUIREMENTS

Professional mobility is a significant source of labour.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	18.0	26.1	Under 25 year	6.2	-	Full-time	98.4	98.5
Males	82.0	73.9	Over 54 years	14.4	-	Part-time	1.6	1.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Manufacturing (22)
- Pulp and Paper (3)
- Machinery and Other Equip. (4)
- Aircraft and Aircraft Parts (5)
- Telecom. Equip. (3)

Gov't Service (10)
- Other Federal Service (4)
- Provincial Service (3)
- Local Gov't Service (3)

Community Services (11)
- Elem. and Sec. Schools (3)
- Hospitals (4)
- Advertising Services (2)
- Restaurants, Taverns (2)

Transportation, Communications (2)
- Electric Power (3)
- Air Transport (2)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. This occupation is vulnerable to changes in the economy, particularly where jobs in the manufacturing sector are concerned. The buyer's task is all the more important in bad economic times. Buyers must combine knowledge of how to secure reliable, diversified sources of supply at low prices with technical knowledge and marketing and negotiating skills. The computerization of many routine operations means that buyers' tasks are shifting away from records management towards medium- and long-term forecasting and strategic planning. With the advent of international trade, buyers are often required to travel abroad.

PURCHASING OFFICERS AND BUYERS, EXCEPT WHOLESALE AND RETAIL TRADE 1175

5. EDUCATION AND SKILLS

There is no specific training for this occupation but secondary-school students are advised to take accounting, computer science and economics courses. Jobs as clerk or assistant buyer provide a means of entry into this occupation. A post-secondary degree allows candidates to enter a buyer's position directly. The Purchasing Management Association of Canada is offering courses in Quebec in the various CEGEPs and universities. Laval University offers a bachelor's degree with a specialization in procurement. General technical knowledge and familiarity with computer systems applied to purchasing and stock control are sought, as are personal qualities such as a sense of dialogue and co-operation and ability to work in a team. Bilingualism is an asset.

6. SALARY

According to the 1986 census, the average salary of buyers working full time was $29,594.

INSPECTORS AND REGULATORY OFFICERS 1176

Examples: Restaurant Inspector, Traffic Inspector, Insurance Inspector, Ship Inspector, Tariff Inspector, Transportation Inspector, Safety Inspector

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
3,165	5,020	1,855	1,035	2,890

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
35	-	-	543	578

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	9.5	14.3	Under 25 years	9.2	-	Full-time	97.7	96.4
Males	90.5	85.7	Over 54 years	19.2	-	Part-time	2.3	3.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transp., Communications (24)
- Air Transport (4)
- Air Transp. Serv. (3)
- Rail Transport (3)
- Water Transport Serv. (2)
- Urban Transit Systems (7)
- Highway and Bridge Maint. (2)
- Electric Power (2)
- Water Distribution (1)

Community and Communications Services (24)
- Scientific Studies and Services (4)
- Miscellaneous Business Services (9)
- Trade Unions (6)

Finance, Ins., Real Estate (20)
- Insurance Carriers (9)
- Ins. and Real Estate Agencies (7)

Gov't Service (6)
- Provincial Service (5)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. Market conditions for inspectors' positions are favourable. Public concern over the safety of dangerous products and chemical products is helping to maintain the demand for inspection services even though commercial activity is slowing down. Deregulation of some industries, such as road transportation, could have a positive impact on the demand for these professionals owing to the growing importance that regulation is placing on safety.

5. EDUCATION AND SKILLS

The various occupations in this group all require specific studies and experience. Ideally, candidates will have completed a university or college program in a related field of study. In almost all cases, inspectors are also expected to have acquired a fair amount of experience in their area. The amount of experienced required usually increases with the complexity of the duties. Moreover, inspectors must be willing to undergo on-the-job and classroom training, take exams and, in some cases, become accredited.

For occupational safety inspectors, a community college diploma in industrial safety and sanitation and a certificate of collegial technical studies in prevention are assets. For traffic inspectors, a secondary-school diploma and on-the-job training are required, as well as a driving permit obtained in the past five years and three years' experience as a bus driver. For restaurant inspectors, a diploma of collegial studies in hotel management technology is an asset, while for hotel and tourist establishment inspectors, a diploma of collegial studies in hotel management technology is required by employers. For animal protection inspectors, a diploma of collegial studies in animal health is an asset even though training is often acquired on-the-job and a secondary-school diploma is sufficient to enter this occupation.

6. SALARY

According to the 1986 census, the average salary of inspectors and regulatory officers was $31,348.

OCCUPATIONS RELATED TO MANAGEMENT AND ADMINISTRATION 1179

Examples: Industrial Development Representative, Sales Promotion Administrator, Public Relations Agent, Labour Organization Agent, Association Executive Secretary, Tourism Co-ordinator

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
15,125	18,975	3,850	4,020	7,870

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
1,660	0	25	2,280	3,965

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	27.7	38.9	Under 25 years	-	-	Full-time	-	95.5
Males	72.3	61.1	Over 54 years	-	-	Part-time	-	4.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Business Services (12)
- Advertising Serv. (2)
- Eng. and Scient. Serv. (2)
- Mgmt. Cons. Off. (6)
- Misc. Business Services (2)

Gov't Service (22)
- Other Federal Service (7)
- Provincial Service (12)
- Local Gov't Serv. (3)

Misc. Services (12)
- Labour Organizations (9)
- Misc. Services, n.e.c. (3)

Transp., Comm. and Public Util. (5)
- Public Utilities (1)
- Radio and Television Broadcasting (1)
- Telephone Systems (1)
- Electric Power (2)

Fin., Ins., Real Estate (8)
- Banks, Other Deposit Accepting Inst. (4)
- Insurance Carriers (2)
- Real Estate Operators (2)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. More than 7,800 job openings are expected, half of which will be created through attrition of the present labour force. These positions are generally attained after several years of experience. This occupational group includes public relations agents, information officers, company consultants, promoters and various other agents (business agents, advertising agents, etc.). Growing concern about maintaining the quality of communications with outside parties is leading more and more companies to include public relations agents on their management teams. Public relations falls within the management function category. Such new clienteles as health and social service organizations, professional corporations, law firms and financial consulting firms could provide job prospects for public relations professionals. A number of specialized areas could offer interesting opportunities for communications consultants, such as financial

4. LABOUR MARKET TRENDS (cont'd)

communications, press communications, in-house communications and management of emergency situations. Given that personal contacts and communications are basic characteristics of all occupations related to management and administration, candidates must have good interpersonal and communication skills.

5. EDUCATION AND SKILLS

Entry to these occupations requires post-secondary training. In general, a bachelor's degree in business administration, public relations, mass communications or political science, or a community college diploma in financial management, business administration or commerce are in demand. Relevant experience and on-the-job training are required.

6. SALARY

According to the 1986 census, the average salary of administrative managers working full time was $33,672.

CHEMISTS 2111

Examples: Analytical Chemist, Physical Chemist, Inorganic Chemist, Industrial Chemist, Petroleum Chemist, Agricultural Chemist, Food Chemist, Nutritional Chemist

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,445	2,830	385	380	765

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
100	-	-	490	590

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	17.2	23.3	Under 25 years	71.0	-	Full-time	96.3	98.1
Males	82.8	76.7	Over 54 years	8.8	-	Part-time	3.7	1.9

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Chemical & Chem. Prod. Ind. (24)
- Plastics (2)
- Pharmaceuticals (10)
- Paint and Varnish (2)
- Toilet Preparations (2)
- Industrial Chemicals (2)
- Misc. Chemical Products (6)

Education & Related Serv. (16)
- Post-secondary Education (1)
- Universities and Colleges (15)

Gov't Service and Defence (11)
- Other Federal Service (5)
- Provincial Service (5)
- Local Gov't Service (1)

Business Services (9)
- Scientific Studies and Services (9)

Health and Social Services (5)
- Hospitals (3)
- Diagnostic & Ther. Serv. (2)

Food and Beverage Industry (4)
- Dairy Products Ind. (2)
- Misc. Food Ind. (1)
- Beverage Ind. (1)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an average rate, given the labour market outlook in the manufacturing sectors, particularly in the food, chemical products, pulp and paper and services industries and in public administration. Job opportunities for chemists are affected by the amount of funds allocated to chemical research and development. Technological progress has had very little effect on this occupational group. Jobs may open up in the communications and information fields as public debate concerning quality control in the health and environment sectors requires relevant and reliable information linked to chemists' expertise.

5. EDUCATION AND SKILLS

A university degree with a specialization in chemistry, chemical engineering or a related field is required. Membership in the Professional Corporation of Chemists is mandatory. To become a member of the Corporation, a bachelor's degree and two years' experience are required. A master's degree or doctorate may be required for some jobs.

6. SALARY

According to the 1986 census, the average salary of chemists working full time was $32,609.

GEOLOGISTS 2112

Examples: Oceanographer, Paleontologist, Geochemist, Geophysician, Hydrologist, Mineralogist, Seismologist

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
735	790	55	80	135

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
115	-	-	420	535

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	14.4	14.7	Under 25 years	15.8	-	Full-time	97.5	94.4
Males	85.6	85.3	Over 54 years	3.6	-	Part-time	2.5	5.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Community, Business and Personal Service Ind. (33)
- Universities and Colleges (6)
- Diagnostic & Therapeutic Services (1)
- Computer Services (1)
- Scientific Studies and Services (23)
- Off. of Mgmg. and Business Consultants (1)
- Misc. Business Services (1)

Gov't Service and Defence (21)
- Other Federal Service (8)
- Federal Service (13)

Services Incidental to Mining (15)
- Contract Drilling (2)
- Misc. Services Incidental to Mining (13)

Metal Mines (6)
- Misc. Metal Mines (6)

4. LABOUR MARKET TRENDS

Forecasts indicate a below-average employment growth, and the labour supply is expected to exceed the demand. It will still be difficult for new graduates to enter the labour market, however, and no improvement is anticipated. Geologists are employed mainly in petroleum research and in mining-related services. The demand for geologists will depend on the employment outlook in the mining sector and in petroleum and gas research. Compared to other provinces, the mining industry in Quebec has been losing ground for several years, and only moderate growth is expected in this sector. This occupational group is very sensitive to economic fluctuations. The employment outlook for geologists might improve as petroleum reserves diminish and prices increase. Openings

4. LABOUR MARKET TRENDS (cont'd)

may be created by the ongoing research for new sources of energy. Technological changes, ultra-violet and infra-red devices, soil and sub-soil analyses conducted by airplane or satellite and the computerized processing of data obtained from measurement devices are making the tasks of geologists more complex. Knowledge of these new technologies is an asset. Nonetheless, the use of "electronic prospectors" and detecting devices may reduce the demand for geologists. Geographical mobility is very important for geologists. Knowledge of computerized cartography systems is an asset. Deep sea exploration and ocean research should maintain the demand for oceanographers.

5. EDUCATION AND SKILLS

A university degree in geology with a specialization in paleontology, petroleum geology or geochemistry is required.

6. SALARY

According to the 1986 census, the average salary of geologists working full time was $32,609.

PHYSICISTS 2113

Examples: Astronomer, Acoustician, Experimental Physicist, Laser Specialist, Biophysicist

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
310	415	105	65	170

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
15	-	-	210	225

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	9.5	8.3	Under 25 years	9.5	-	Full-time	97.4	100.0
Males	90.5	91.7	Over 54 years	7.9	-	Part-time	2.6	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Business Services (17)
- Scientific Studies and Services (17)

Health and Social Serv. (16)
- Hospitals (14)
- Misc. Health Services (2)

Gov't Service and Defence (14)
- Defence Serv. (7)
- Other Federal Service (2)
- Provincial Service (5)

Transportation Equip. Ind. (8)
- Aircraft and Aircraft Parts Man. (8)

Elec. Power, Gas & Water Util. (8)
- Electrical Power (8)

Primary Metal Ind. (6)
- Iron Foundries (2)
- Smelting and Refining (2)
- Metal Extruding, n.e.c. (2)

4. LABOUR MARKET TRENDS

Forecasts indicate that employment will grow at an above-average rate, although the number of jobs that will open up is not high, i.e. about 170. Labour supply is expected to exceed the demand. Physicists' jobs are not vulnerable to economic fluctuations. Movement of labour between fields is limited, resulting in a situation where a certain type of physicist may be difficult to find while another specialty has an oversupply. A small number of openings is anticipated in acoustics, optics, oceanography and fluid mechanics. Job opportunities in the public sector and in colleges and universities are limited, but the outlook in the business and scientific services sectors should be brighter. The growing concern on the part of the public and governments about pollution problems could spur employment opportunities for a number of specialists in this area. The tasks of physicists' are made easier by new technologies since instruments are increasingly being linked to microcomputers for automated reading and recording of data.

5. EDUCATION AND SKILLS

A university degree in physics or physical engineering is required. A master's degree or doctorate is required for some positions. A doctorate is recommended for astronomers. Knowledge of foreign languages may be useful. A master's degree is required for nuclear physicists.

6. SALARY

According to the 1986 census, the average salary of physicists working full time was $42,419.

METEOROLOGISTS 2114

Examples: Meteorologist, Climatologist, Industrial Meteorologist

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
230	315	85	45	130

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
5	-	-	-	5

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	-	-	Under 25 years	-	-	Full-time	-	-
Males	-	-	Over 54 years	-	-	Part-time	-	-

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Service (65)
- Defence Services (3)
- Other Federal Services (55)
- Provincial Service (7)

Business Services (20)
- Scientific Studies and Services (20)

Education and Related Serv. (10)
- Universities and Colleges (10)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate. The number of jobs available will remain low, i.e. nearly 130 jobs. The employment outlook for meteorologists is seldom affected by recessions. However, they are sometimes affected by government decisions concerning spending. The growing federal and provincial cutbacks in spending may limit job opportunities in the public sector, but the growing trend toward sub-contracting could increase employment prospects for these specialists in the business services sector.

Technological changes has an impact on the tasks of meteorologists. The use of complex spectroscopes and satellites to monitor low and high pressure systems and the analysis of data by computer permit better simulations and decrease calculations. These new technologies may cause the demand for meteorologists with a general training to decline. Nonetheless, the need for precise meteorological information in sectors such as agriculture or transportation could stimulate job openings for specialized meteorologists. As the capacity to produce detailed specialized information by means of new systems increases, meteorologists may be called on to assist chemical and agricultural consultants in determining atmospheric conditions and soil conditions. The public's concern with pollution may improve the employment outlook for industrial meteorologists.

5. EDUCATION AND SKILLS

A university degree in meteorology is required. After obtaining a bachelor's degree, graduates must complete a nine-month training period with the Department of the Environment in order to practise as a professional meteorologists.

6. SALARY

According to the 1986 census, the average salary of meteorologists working full time was $39,015.

PHYSICAL SCIENCES TECHNOLOGISTS AND TECHNICIANS 2117

Examples: Biochemistry Technician, Metallurgical Tester, Geology and geophysics Technician, Textile Technologist, Forest Products Technologist, Chemistry Technologist, Nuclear Power Station and Heavy Water Plant Technician, Meteorology Technician, Plastics Technician

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
5,800	5,910	110	935	1,045

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
540	-	720	310	1,570

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	23.8	28.0	Under 25 years	-	-	Full-time	-	96.8
Males	76.2	72.0	Over 54 years	-	-	Part-time	-	3.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Serv. and Defence (12)
- Defence Serv. (1)
- Other Federal Serv. (3)
- Provincial Serv. (7)
- Local Gov't Serv. (1)

Chem. & Chem. Prod. Ind. (10)
- Plastics (1)
- Pharmaceuticals (2)
- Toilet Preparations (1)
- Chemical Prod. Ind. (2)
- Misc. Chemical Prod. (4)

Business Services (9)
- Scientific Studies and Services (9)

Health and Social Serv. (6)
- Hospitals (5)
- Diagnostic and Therapeutic Serv., n.e.c. (1)

Primary Metal Industries (5)
- Iron and Steel Mills (1)
- Smelting and Refining (4)

Textile Industries (2)
- Cotton Yarn and Cloth Mills (1)
- Misc. Textile Ind. (1)

4. LABOUR MARKET TRENDS

Below-average employment growth is forecast. Over the next few years, the number of qualified workers is expected to exceed demand. Job prospects in the group vary from specialty to specialty. The demand for physical sciences technicians depends on government funding, research projects and the level of research and development activities in the private sector. Sales jobs may open up with companies specializing in scientific instrumentation. Computerized test reports and automated analysis could reduce the workload for technicians in some cases. Nonetheless, other technological advances will require competent and experienced technicians and technologists. The growing concern on the part of the public and government about problems arising from water, air and soil pollution and the introduction of legislation intended to control pollution may stimulate activity in this sector and create job openings for water, air and sanitation technicians. The employment outlook for plastics

4. LABOUR MARKET TRENDS (cont'd)

technologists is good, and the Quebec plastics industry is even having trouble finding enough qualified workers. While CAD/CAM technology is still not widely used, familiarity with it is definitely an asset, as are managerial, supervisory, development and analysis, and human relations skills. Openings for geology and geophysical technicians depend on changes in oil and metal prices. Low commodity prices have meant sharp cuts in exploration budgets, thus reducing labour demand in these occupations. Jobs for chemistry technologists are determined by demand for chemical products and raw materials. There seems to be an oversupply in this area that will probably continue for some time. Demand for forest products processing technologists depends to a large extent on the economic situation, particularly the health of the construction industry. Skills in personnel management are an asset for these technicians.

The demand for meteorology technicians may be slowed down by the use of complex spectroscopes and satellites to monitor low and high pressure systems and analyse data by computer. Since these technologies permit better simulations and decrease calculations the need for meteorology technicians may decline as their skills become less sought after.

5. EDUCATION AND SKILLS

A community college diploma in the relevant specialty is being increasingly required by employers. Communications skills are becoming more important as technologists and technicians are given more responsibility to act as intermediaries between companies and their customers and between teams involved in various projects. Technical knowledge and experience with computer systems are in demand. Personnel management skills are an asset.

6. SALARY

According to the 1986 census data, the average salary of physical sciences technicians and technologists working full time was $27,841.

AGRONOMISTS AND RELATED SCIENTISTS 2131

Examples: Agricultural Adviser, Horticulturist, Animal Scientist, Soil Conservationist

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,815	2,115	300	395	695

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
310	-	-	905	1,215

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	18.4	22.7	Under 25 years	11.6	-	Full-time	96.8	94.7
Males	81.6	77.3	Over 54 years	10.8	-	Part-time	3.2	5.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Service (44)
- Other Federal Service (10)
- Provincial Service (29)
- Local Gov't Service (5)

Agriculture (13)
- Experimental Farms (8)
- Agricultural Services (5)

Commerce (7)
- Farm Prod., Wholesale Trade (1)
- Wholesalers, n.e.c. (3)
- Florists (2)
- Retailers, n.e.c. (1)

Education (7)
- Elem. and Sec. Schools (3)
- Universities and Colleges (3)
- Libraries and Museums (1)

4. LABOUR MARKET TRENDS

Employment in these occupations is expected to grow at an average rate, with the labour supply exceeding the demand. The requirement for the scientific expertise of agronomists is being stimulated by the spread of sophisticated agricultural technology, the introduction of new types of breeding (e.g. rabbits and goats), and increasing interest in controlled-atmosphere production (e.g. hogs and poultry, and under glass). Biotechnological research and its application to the agricultural sector should also create some new jobs, although in the short term they will be few in number. Employment opportunities are opening up in a neglected area of the tertiary sector, professional marketing and trade services. The administration, finance and sales representation sectors may also create good employment opportunities.

4. LABOUR MARKET TRENDS (cont'd)

Agronomists' tasks are being changed considerably by the introduction of microcomputer and data processing technology, and this is true for both farm management and production (e.g. calculation of food ratios, dairy production and field management). Demand is growing for agronomists who are specialized in farm management. The gradual establishment of farm management pools designed to provide members with an array of consulting services in accounting, taxation and management could further boost demand for agronomists who have a knowledge of these areas in addition to computer skills. Financial and legal knowledge encompassing farm credit, economics, financial management, governmental agreements, joint ventures and agricultural management pools is increasingly in demand.

Concerns about protecting the environment could improve the employment outlook for these scientists. New ecological concerns are tending to make agronomists' tasks more complex (conservation and development of renewable resources, agricultural pollution).

The many services provided by banks to the farming community may boost employment prospects in banks for agronomists and agricultural technicians. As agricultural consultants in banks, agronomists will be called upon to provide specialized technical support to both branches and clients, and may therefore find it useful to focus increasingly on agricultural economics, plant technology, zootechnology, etc. In addition to banks, other jobs could open up in companies that deal with farmers, such as processing and marketing companies. Demand for horticulturists may be stimulated by new reforestation policies which require horticultural skills in the areas of producing quality forest seed, land preparation, the use of seedlings in containers and plantation maintenance. Ornamental horticulture is a growing sector. Even though employment in a number of horticultural occupations is subject to considerable seasonal fluctuations, the market may remain favourable for horticulturists.

5. EDUCATION AND SKILLS

A university degree in agriculture is required. An occupational permit issued by the Order of Agronomists of Quebec on the basis of an examination as well as membership in the Order are required. For horticulturists, a community college diploma in the three-year agricultural technology program, with the agriculture option, is required. For some jobs, a university degree with a specialization in horticulture is necessary.

6. SALARY

According to the 1986 census, the average salary of agronomists and related scientists working full time was $31,025.

BIOLOGISTS AND RELATED SCIENTISTS 2133

Examples: Marine Biologist, Botanist, Zoologist, Cytologist, Bacteriologist, Microbiologist, Anatomist, Toxicologist, Ecologist, Biochemist

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,065	2,600	535	455	990

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
275	0	5	885	1,165

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	35.7	35.9	Under 25 years	-	-	Full-time	-	95.3
Males	64.3	64.1	Over 54 years	-	-	Part-time	-	4.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Service (28)
- Other Federal Serv. (12)
- Provincial Service (14)
- Local Gov't Service (2)

Health and Social Services (27)
- Hospitals (20)
- Diagnostic & Ther. Serv. (7)

Education (22)
- Elem. and Sec. Schools (4)
- Post-secondary Inst. (2)
- Universities and Colleges (16)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast, although labour supply is expected to exceed demand. Research into new drugs, biology, environmental protection and plant strains is creating new openings for biologists. The demand for environmental biologists should increase under the impact of growing public and government concern about pollution. The increasing number of biotechnology firms may boost demand for biologists. However, though the number of biotechnology firms is expected to increase, jobs may remain few and require specialized skills. The expansion of the environmental protection sector, considered an industry, may open up new jobs for biologists working in such fields as conservation, the fight against pollution, waste management and recycling. The acquisition of skills in several disciplines (functional engineering, microbiology and other scientific fields) could make it easier for these professionals to enter the labour market. In the field of research, there is a shortage of candidates with doctoral degrees.

5. EDUCATION AND SKILLS

Entry to these occupations usually requires a bachelor's degree in biology, zoology or botany. Some positions require a master's or doctoral degree. Pharmacologists (applied sciences) must be members of the Order of Pharmacists of Quebec to be able to practise and use the title. Ecologists are required to have a university degree in a specialized undergraduate level program such as biology, geography, forestry or agronomy, followed by a graduate level program in ecology or a related discipline. Veterinary pathologists must have a graduate degree in veterinary medicine, and be members of the Order of Veterinarians of Quebec if they wish to practise and use the title. The same is true for medical pathologists, for whom membership in the Order of Physicians of Quebec is mandatory. Plant pathologists must be members of the Order of Agronomists of Quebec to be able to practise their profession and biochemists must be members of the Order of Chemists of Quebec.

6. SALARY

According to the 1986 census, the average salary of biologists and related scientists working full time was $32,244.

LIFE SCIENCES TECHNOLOGISTS AND TECHNICIANS 2135

Examples: Agricultural Technician, Bacteriology Technician, Seed Analyst, Zoology Technician, Fish Farm Technologist, Silviculturist, Resource Management Technician, Forest Technician

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
3,295	4,165	870	440	1,310

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
585	70	750	500	1,905

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	27.8	34.2	Under 25 years	38.6	-	Full-time	96.8	94.6
Males	72.2	65.8	Over 54 years	3.1	-	Part-time	3.2	5.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Service (33)
- Other Federal Service (7)
- Provincial Service (22)
- Local Gov't Service (4)

Agriculture (9)
- Experimental Farms (6)
- Agricultural Services (3)

Forestry (17)
- Logging (4)
- Forestry Services (13)

Education (12)
- Post-secondary Inst. (3)
- Universities and Colleges (9)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast, and the supply of qualified labour in this group is expected to exceed demand. Employment in this occupational group depends on the allocations made by governments to the public administration sector, the services sector, the forestry industry and research and development in the private sector. The labour market outlook is best in the area of agricultural quality control. Job opportunities may open up in the field of environmental protection where there is a requirement for technical skills in the area of pollution control. Knowledge of and experience in computers, diagnostic techniques and design or multidisciplinary development should make it easier for these technicians to enter the labour market. Employment in this sector is affected by seasonal fluctuations and reaches a peak during the summer.

4. LABOUR MARKET TRENDS (cont'd)

Prospects for forestry technicians depend on government forest development policies. The new public reforestation policy adopted by the provincial government may stimulate demand for these workers. Growing concern on the part of the public and government about forest conservation may affect job opportunities for forestry technicians in the forestry industry. The area of forest equipment and product sales offers good employment prospects. Intensive reforestation activity could generate numerous jobs for silviculturists, in areas such as the transplanting of trees, land preparation, spacing and thinning of plants. Jobs may open up in small sub-contracting transportation companies or in nurseries. However, employment will retain its seasonal character, with most of the jobs available during the summer months. The services of zoology technicians are required by producers, agricultural professionals and farm organizations. These workers are therefore often called upon to deal directly with these groups. Consequently, both general and technical training are necessary, and personnel management and communication skills are in demand. Openings for soil technologists may increase as a result of government land conservation and environmental protection programs.

5. EDUCATION AND SKILLS

Completion of a three-year community college program in the relevant specialty is usually required. Mobility is necessary for most of these jobs, and many are temporary, contract, part-time or seasonal positions. Full-time positions can often be obtained after two or three years' experience. There is a certain amount of competition between university graduates in agriculture and community college graduates in agricultural technology.

6. SALARY

According to the 1986 census, the average salary of life sciences technologists and technicians was $24,262.

OCCUPATIONS IN LIFE SCIENCES, NOT ELSEWHERE CLASSIFIED 2139

Examples: Ecologist - Forestry, Forester

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,025	1,310	285	190	475

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
195	-	70	-	265

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	23.1	37.0	Under 25 years	30.8	-	Full-time	96.4	100.0
Males	76.9	63.0	Over 54 years	8.8	-	Part-time	3.6	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Forestry (54)
- Logging (14)
- Forestry Services (40)

Gov't Service (19)
- Other Federal Service (6)
- Provincial Service (13)

Agriculture (10)
- Experimental Farms (10)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. Prospects for foresters depends on government forest management policies. The reforestation policy for public forests advocated by the provincial government may continue to stimulate the demand for these workers. Foresters are called on to assume team supervision tasks. Good verbal communication skills are an asset. Activity in the construction sector has an impact on the demand for forest products and therefore affects employment in these occupations. The growing concern on the part of the public and government to conserve forests may boost job prospects for forestry technicians in the forestry industry. Technological changes have an impact on the tasks of these technicians. The use of computer technology and specialized software in the area of forest management is becoming increasingly widespread and is affecting a number of sectors, such as harvest planning, inventory and fire prevention. In forestry, knowledge of computerized geographic information systems that combine cartography with forest inventory data and other information, such as agricultural activity and property lines, is becoming an asset. The field of forest equipment and products sales offers good employment opportunities.

5. EDUCATION AND SKILLS

Entry to these occupations generally requires a community college diploma in the relevant specialty. Foresters need an undergraduate degree, and must be members of the Order of Forest Engineers of Quebec to be able to practise and use the title. Candidates must complete a nine-month training period, under the supervision of an engineer who is already a member of the Order. Mobility is an asset for technicians working in environmental protection. Only a few community college graduates have jobs in food technology.

6. SALARY

According to the 1986 census, the average salary of workers specialized in the life sciences, not elsewhere classified, who were employed full time was $25,749.

ARCHITECTS 2141

Examples: Building Architect, Landscape Architect

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,800	3,325	525	615	1,140

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
110	-	5	1,440	1,555

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	9.7	18.2	Under 25 years	6.8	-	Full-time	95.9	95.8
Males	90.3	81.8	Over 54 years	12.7	-	Part-time	4.1	4.2

3. MAIN SECTORS PROVIDING EMPLOYMENT

Business Services (71)
- Architects' Off. (68)
- Scientific Studies and Serv. (3)

Gov't Service (10)
- Other Federal Service (2)
- Provincial Service (5)
- Local Gov't Service (3)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a rate slightly above the average. The supply of qualified workers in the field should surpass demand. The arrival on the market of several other types of professionals and technicians undercutting architects but offering similar services, such as construction management, exterior decoration, landscaping and urban planning, will intensify competition. This occupational group is vulnerable to economic fluctuations since it is linked to the construction sector. Growth in the construction sector will be weak and, consequently, so will growth in the field of architecture. The level of construction activity is expected to increase in the industrial sector rather than the residential or real estate sectors, which are the ones requiring architectural drawings. Home renovation, maintenance and improvement could help to maintain job opportunities for architects.

4. LABOUR MARKET TRENDS (cont'd)

Technological innovations such as computer-aided design (CAD) allowing the creation of three-dimensional plans on a computer screen have had an impact on the tasks of architects. Routine design tasks have been eliminated and it is now possible for architects to quickly correct the basic drawing. Job prospects are more promising for those familiar with computer-aided design, which is gradually being used on a regular basis by medium-sized and large firms. Furthermore, to meet increasing demands from customers, knowledge and experience in economic feasibility studies, interpretation of by-laws and regulations, and loan applications are assets.

5. EDUCATION AND SKILLS

A university degree in architecture is required. Membership in the Order of Architects of Quebec is mandatory. For landscape architects, membership in the Association of Landscape Architects is optional.

6. SALARY

According to the 1986 census, the average salary of architects working full time was $32,178.

CHEMICAL ENGINEERS 2142

Examples: Plastics Engineer, Process Technology Engineer, Chemical Product Design and Development Engineer, Environmental Engineer, Explosives Engineer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,140	1,360	220	180	400

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
30	-	55	275	360

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	3.0	8.8	Under 25 years	10.8	-	Full-time	99.3	100.0
Males	97.0	91.2	Over 54 years	7.8	-	Part-time	0.7	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Business Services (18)
- Scientific Studies and Services (17)
- Management Consulting Services (1)

Paper Industries (7)
- Pulp and Paper Plants (7)

Food and Beverage Industries (4)
- Flour Industry (1)
- Other Food Industries (3)

Chemical Industries (16)
- Synthetic Resins (5)
- Paint and Varnish (1)
- Soap and Cleaning Comp. (1)
- Chemical Products Ind. (5)
- Other Chemical Prod. (4)

Rubber and Plastics Industries (6)
- Rubber Products Ind. (3)
- Plastics Fabricating Ind. (3)

Gov't Service (12)
- Defence Services (2)
- Other Federal Service (5)
- Provincial Service (5)

Primary Metal Industries (5)
- Smelting and Refining (5)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a rate slightly above the average. Most chemical engineers are working in the manufacturing industry, particularly in the chemical, paper, rubber and plastics, primary metal and food and beverages industries. A large number of chemical engineers are employed by business services and governments. Among the factors that may increase demand for this group of engineers is the growing complexity of chemical products, the development of plastic and synthetic fibers and the spread of biotechnology and its many industrial

4. LABOUR MARKET TRENDS (cont'd)

applications. Although the number of new jobs in industry will not necessarily be high, chemical engineers are in demand in this sector because the skills required in industrial processes involving biotechnology and its commercial applications are similar to those required in chemical engineering. The growing concern for environmental conservation should increase the requirement for chemical engineers. The demand for engineers specializing in petrochemicals could be adversely affected by the impact of higher oil prices on the consolidation of investments in the energy sector. New technologies are affecting the duties of chemical engineers as much as those of other groups of engineers. With progressive computerization, the role of engineers is becoming more diversified and management duties are taking up increasing amounts of their time. Knowledge of computer-assisted engineering systems in the field of fluid mechanics, the most recent of which can be read in 3D, is an asset for chemical engineers working in the areas of plastics, food and beverages and primary metals. Managerial, supervisory and communication skills are assets.

5. EDUCATION AND SKILLS

A university degree in chemical engineering is required. Membership in the Order of Engineers of Quebec is mandatory.

6. SALARY

According to the 1986 census, the average salary of chemical engineers working full time was $42,236.

CIVIL ENGINEERS 2143

Examples: Structural Design Engineer, Construction Engineer, Transportation Engineer, Municipal Engineer, Hydrology Engineer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
6,125	7,060	930	1,340	2,270

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
210	-	-	1,840	2,050

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	2.8	4.5	Under 25 years	-	-	Full-time	-	98.6
Males	97.2	95.5	Over 54 years	-	-	Part-time	-	1.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Business Services (39)
- Scientific Studies and Services (39)

Transportation (6)
- Railway Transport (3)
- Highway and Bridge Maintenance (3)

Gov't Service (16)
- Other Federal Serv. (2)
- Provincial Serv. (7)
- Local Gov't Serv. (7)

General Contractors (11)
- Building Construction (4)
- Highway, Bridge and Street (4) Construction (4)
- Other Construction (3)

4. LABOUR MARKET TRENDS

Forecasts indicate that employment will grow at an average rate. Brisk competition is expected for the available jobs. Employment prospects for civil engineers are linked to construction activity that in turn is determined by general economic conditions. The implementation of Phase II of the James Bay hydroelectric project may help to maintain the demand for civil engineers. Nonetheless, the absence of large public projects, the drop in construction activity and government budget constraints resulting in cuts in highway, bridge, sewer system and water treatment plant design and construction projects may further reduce this demand. Job prospects may arise in the international markets. The nature of the projects undertaken by engineering consulting firms is changing. Contracts are increasingly aimed at regional projects and management and training services rather than heavy engineering work. New skills are therefore in demand. Moreover, the appearance of smaller, more specialized engineering firms may create openings for civil engineers.

4. LABOUR MARKET TRENDS (cont'd)

Technological changes have had an impact as much on the duties of civil engineers as on those of other engineers. Computer-assisted design manufacturing (CAD/CAM) free engineers from doing routine calculations and drawings of a repetitive nature. Duties are shifting more towards management, project design and supervision of project teams. In the context of team work, communication and managerial skills are increasingly sought after. Engineers are seeing their role shift more and more towards technology management. Knowledge of design software is a must.

The use of post-design project supervision software and of control software is widespread. Although these types of software do not affect engineering duties as such, they free engineers from certain tasks. Civil engineers are increasingly assuming the overall control of projects, to the point of finding funds for them.

5. EDUCATION AND SKILLS

A university degree in civil engineering is normally required. Membership in the Order of Engineers of Quebec is mandatory.

6. SALARY

According to the 1986 census, the average salary of civil engineers working full time was $43,650.

ELECTRICAL ENGINEERS 2144

Examples: Computer Science Engineer, Electronic Engineer, Control Systems Engineer, Sound Engineer, Aerospace Electrical and Electronic Engineer, Computer Engineer, Communications Engineer

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
7,505	10,100	2,595	1,380	3,975

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
140	-	-	3,765	3,905

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	4.5	6.5	Under 25 years	7.1	-	Full-time	98.7	98.6
Males	95.5	93.5	Over 54 years	10.1	-	Part-time	1.3	1.4

3. MAIN SECTORS PROVIDING EMPLOYMENTS (1986 %)

Electrical Products Industries (22)
- Telecom. Equip. Man. (18)
- Electr. Ind. Equipment (2)
- Electric Wire and Cable Man. (2)

Communication (12)
- Radio and Television Broadcasting (2)
- Telephone Systems (9)
- Telegraph and Cable Systems (1)

Electric Power, Gas and Hydro Utilities (18)
- Electric Power (18)

Business Services (14)
- Scient. Studies and Serv. (13)
- Management Consulting Services (1)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a rate well above the average. The supply of qualified engineers ready to enter the labour market should exceed demand. Most electrical engineering jobs are in the public utilities sector, namely electricity production and telecommunications as well as in the manufacturing sector and in engineering consulting firms. Given the forecasts for these sectors, the labour market outlook for electrical engineers is bright. The development of fiber optic communications, microprocessor technology and its applications should spur requirement for these professionals. Demand for electronics specialists should be greater than demand for engineers specializing in electrical technology.

4. LABOUR MARKET TRENDS (cont'd)

The anticipated growth in the aerospace industry should boost the demand for electrical engineers specializing in this area. In the air transportation sector, regulations requiring the modification of older aircraft, including the replacement of old electrical and mechanical instruments with electronic components, new technologies involving larger numbers of electronic components on new aircraft, and new aircraft maintenance technologies should stimulate the demand for these engineers. The development of expert systems should create employment opportunities for engineers specializing in the design of basic aircraft maintenance software. Knowledge of existing expert systems makes the duties of aerospace engineers easier by allowing them to read various indicators such as temperature, engine performance, etc., directly. The development of robotics software for robot manufacturers and their suppliers will create good opportunities for highly qualified computer engineers, although this market is not limited to Quebec. Specialists in computer design should see an increase in employment opportunities. New or developing areas, such as software testing, power supply, radio frequency, microtechnology and artificial intelligence may provide job prospects. There will be growing demand for electronics engineers specializing in systems network architecture, data bank design, operating systems and artificial intelligence.

The high level of technical knowledge required on the part of vendors, especially in electronics, opens up a new field of opportunity for engineers: marketing. Communication skills are an asset. Continuing education is essential for engineers if they wish to keep abreast of developments in their area of specialization.

5. EDUCATION AND SKILLS

A university degree in electrical engineering is normally required. Membership in the Order of Engineers of Quebec is mandatory.

6. SALARY

According to the 1986 census, the average salary of electrical engineers working full time was $42,203.

INDUSTRIAL ENGINEERS 2145

Examples: Efficiency Engineer, Methods Engineer, Quality Assurance Engineer, Plant Layout Engineer, Manufacturing Engineer

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
4,210	4,890	680	930	1,610

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
165	-	-	2,700	2,865

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	13.4	15.4	Under 25 years	5.7	-	Full-time	99.1	96.9
Males	86.6	84.6	Over 54 years	10.6	-	Part-time	0.9	3.1

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Business Services (13)
- Scient. Studies and Serv. (11)
- Management Consulting Services (2)

Gov't Service (13)
- Other Federal Serv. (3)
- Provincial Serv. (8)
- Local Gov't Serv. (2)

Health and Social Services (6)
- Hospitals (4)
- Other Health Care Inst. (2)

Paper Industries (5)
- Pulp and Paper Plants (5)

Elec. Prod. Industries (4)
- Telecom. Equipment Man. (3)
- Elec. Ind. Equipment Man. (1)

Primary Metal Industries (3)
- Smelting and Refining (2)
- Aluminum Extruding (1)

Machinery Industries (2)
- Misc. Machinery and Equipment (1)
- Office and Store Machinery (1)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an average rate. Forecasts indicate an excess supply of qualified labour with respect to demand. The employment outlook for industrial engineers is linked to the growth rate in the manufacturing and business services sectors. The modernization and expansion of industrial equipment in Quebec is likely to be more moderate over the next few years, which could reduce the employment growth for these professionals. Engineers with advanced skills in and knowledge of new production methods will be most in demand. The new automated machining processes, especially numerically controlled machine tools, have systematized machining into a programming sequence, which leads to the need to organize these tasks around a single production

4. LABOUR MARKET TRENDS (cont'd)

segment. The computerization of production management systems, together with the constant output control this allows, has given industrial engineers more time to devote to production analysis. Computer technology has also meant that engineers now spend far less time on actual calculations and far more time on design and analysis. Employers are looking for people with specific experience and skills related to their particular industrial field. Communication skills are an asset. With the advent of new technologies, the organization of multidisciplinary work teams requires that industrial engineers have good oral communication skills.

5. EDUCATION AND SKILLS

A university degree in industrial engineering, or in mechanical or chemical engineering with emphasis on industrial engineering, is usually required. Engineering training is tending to become more demanding. Knowledge of computerized production control systems is becoming a necessity. Membership in the Order of Engineers of Quebec is mandatory.

6. SALARY

According to the 1986 census, the average salary of electrical engineers working full time was $36,158.

MECHANICAL ENGINEERS 2147

Examples: Plant and Machine Design Engineer, Automation Engineer, Lubrication Engineer, Refrigeration Engineer, Aerospace Vehicle Propulsion Engineer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
4,665	6,345	1,680	1,130	2,810

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
105	-	10	2,810	2,925

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	1.9	3.6	Under 25 years	8.9	-	Full-time	99.1	98.4
Males	98.1	96.4	Over 54 years	15.3	-	Part-time	0.9	1.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Business Services (19)
- Scient. Studies and Serv. (19)

Transportation (6)
- Railway Transport (3)
- Water Transport (2)
- Urban Transit Systems (1)

Gov't Service (5)
- Defence Services(1)
- Other Federal Serv. (1)
- Provincial Serv. (2)
- Local Gov't Serv. (1)

Transport Equipment Ind. (10)
- Aircraft & Aircraft Parts (8)
- Motor Vehicle and Parts (1)
- Railroad Rolling Stock (1)

Elec. Prod. Manufacturing (5)
- Telecom. Equipment (5)

Machinery Industries (6)
- Other Machinery and Equipment (6)

Paper Industries (4)
- Pulp and Paper Plants (4)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast and an oversupply of qualified labour is expected. The fact that mechanical engineers are involved in a wide variety of fields makes them less vulnerable to changing economic conditions than other engineering groups. However, the high degree of specialization means that there may be a shortage of some specialists but an oversupply of others. The largest number of openings will be for plant engineers. Demand for mechanical engineers will be boosted by machine-tool design for increasingly complex manufacturing processes and by software design for robotics. Growth in the aerospace industry will spur demand

4. LABOUR MARKET TRENDS (cont'd)

for mechanical engineers specialized in this area. There is a requirement for heating, ventilation and air-conditioning engineers with knowledge of and experience in maintenance mechanics. Nonetheless, employment prospects will depend on the number of construction projects that will be undertaken for new plants and buildings. New technologies are having an impact on the duties of mechanical engineers with respect to both production and control. Knowledge of graphics design software, industrial production software and project management software is a major asset.

5. EDUCATION AND SKILLS

A university degree in mechanical engineering is required. Managerial and supervisory skills and knowledge of computer-assisted design are sought. Many engineers must now assist in selling their firm's products. Knowledge of more than one specialty is an asset. Membership in the Order of Engineers of Quebec is mandatory.

6. SALARY

According to the 1986 census, the average salary of mechanical engineers working full time was $40,026.

METALLURGICAL ENGINEERS 2151

Examples: Extractive and Process Metallurgy Engineer, Materials Science Engineer, Materials Handling Engineer, Foundry Metallurgist Engineer

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
725	1,095	370	105	475

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
15	-	-	495	510

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	3.6	9.3	Under 25 years	6.4	-	Full-time	100.0	97.5
Males	96.4	90.7	Over 54 years	6.4	-	Part-time	0.0	2.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Primary Metal Industries (37)
- Iron and Steel Mills (14)
- Iron Foundries (4)
- Smelting and Refining (16)
- Aluminum Extruding (3)

Business Services (6)
- Scientific Studies and Services (6)

Transport Equipment Manufacturing (12)
- Aircraft and Aircraft Parts Man. (12)

Wholesale Trade (5)
- Metal Products, n.e.c. (3)
- Wholesalers, n.e.c. (2)

Gov't Service (9)
- Other Federal Serv. (4)
- Provincial Serv. (5)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast and an oversupply of labour is expected. Most metallurgical engineers work either directly or indirectly in the manufacturing sector. The employment level of this occupational group is sensitive to general economic conditions since activity in the manufacturing and primary metal industries fluctuates according to the business cycle. For metallurgical engineers who specialize in physical metallurgy and metallurgical production processes, employment depends on changing economic conditions, the sale of steel exports and the state of the aerospace, automobile and machinery markets.

4. LABOUR MARKET TRENDS (cont'd)

Knowledge of new computer-aided engineering technologies (CAE) is a must. In metallurgy, physical phenomena are complex, three-dimensional and time-dependent. Also, CAE software dealing with fluid mechanics, which involves liquid flow with heat transfer, is constantly being developed. Knowledge of the various existing software packages and their use is an asset for metallurgical engineers.

5. EDUCATION AND SKILLS

A university degree in metallurgical engineering is required. Membership in the Order of Engineers of Quebec is mandatory.

6. SALARY

According to the 1986 census, the average salary of metallurgical engineers working full time was $35,716.

MINING ENGINEERS 2153

Examples: Mine Design/Construction Engineer (underground and surface), Mineral Exploration Engineer, Extraction Engineer, Processing Engineer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
590	775	185	140	325

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
15	-	-	-	15

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	2.1	2.3	Under 25 years	-	-	Full-time	-	96.5
Males	97.9	97.7	Over 54 years	-	-	Part-time	-	3.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Mines (55)
- Iron Mines (10)
- Misc. Metal Mines (38)
- Asbestos Mines (7)

Primary Metal Industries (5)
- Smelting and Refining (5)

Business Services (20)
- Scientific Studies and Services (20)

Gov't Service (4)
- Other Gov't Service (3)
- Provincial Service (1)

Services Incidental to Mining (7)
- Other Contract Drilling (1)
- Misc. Serv. Incidental to Mining (6)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. The requirement for mining engineers is affected by economic factors such as the price of metals and product demand which are likely to influence the level of activity in the mining industry. The mining industry is sensitive to important changes in the commercial situation, resulting in fluctuations in the volume of employment. New technologies in the mining sector and the automation and control of remote-operated equipment are having an impact on the mining engineer's role. Computer-aided design (CAD) is improving the design and drafting process for underground mine infrastructures (wells, galleries and mineral passages) as well as the mining facilities drawing, which is also produced with CAD. CAD combines design and drafting programs that use the same geological and technical information bases. Nevertheless, the development of technologically advanced efficient mining systems, the implementation of increasingly stringent mine safety standards, the recovery of low grade ores, and the mining of minerals under the seabed are fields that should provide opportunities for mining engineers. Engineers with experience in mining or the oil industry may find jobs

4. LABOUR MARKET TRENDS (cont'd)

in biotechnology. Specialists in production process control and data processing have better prospects than other mining engineers. Computer technology in the area of mines, affecting mine planning, feasibility studies and mining geology, is having little effect on the demand for mining engineers. These engineers are increasingly required to have a knowledge of rock mechanics and mine planning. Most of the jobs available are in small remote towns. Mobility is an essential requirement.

5. EDUCATION AND SKILLS

A university degree in mining engineering is required. Membership in the Order of Engineers of Quebec is mandatory. Knowledge of mining and planning applications of computer technology is an asset.

6. SALARY

According to the 1986 census, the average salary of mining engineers working full time was $40,110.

PETROLEUM ENGINEERS 2154

Examples: Reservoir Engineering, Oil and Gas Recovery and Processing Engineer, Chief Drilling and Recovery Engineer

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
230	230	0	35	35

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
-	-	-	45	45

OTHER IMPORTANT REQUIREMENTS

The market is mainly pan-Canadian.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	11.8	2.7	Under 25 years	-	-	Full-time	-	100.0
Males	88.2	97.3	Over 54 years	-	-	Part-time	-	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Petroleum Industry (27)
- Petroleum Refineries (27)

Elec. Power, Gas & Water Util.(22)
- Gas Distribution (22)

Business Services (20)
- Eng. and Scient. Serv. (16)
- Mgmt. Cons. Off. (5)

Chemical Industry (11)
- Plastics (3)
- Industrial Chem Prod. (5)
- Misc. Chemical Prod. (5)

Mines (9)
- Crude Petroleum & Nat. Gas (3)
- Asbestos Mines (3)
- Misc. Mining Services (3)

Wholesale Trade (8)
- Petroleum Prod. (5)
- Electrical Machinery (3)

4. LABOUR MARKET TRENDS

Employment in this occupational group should remain stable. Very few jobs are expected to open up on the Quebec labour market during the forecast period. The market should be viewed from a more pan-Canadian perspective, particularly where exploration is concerned. More than 80% of Canada's petroleum engineers are working in Alberta. Prospects in this group depend on the world price for crude oil and the demand for and price of other energy sources. In the mid 1980s, energy saving meusures and other factors caused a drop in energy prices and reduced the level of exploration and operation of oil and gas wells. In Canada, increased investment in energy projects may stimulate the creation of jobs during the second half of the decade. Aptitudes in chemistry, geology and good communication skills are in demand. Early in their careers, petroleum engineers spend a great deal of time at drilling sites or processing plants that are located in remote regions.

5. EDUCATION AND SKILLS

A university degree in mining or geological engineering is required. Petroleum engineering is not taught in Quebec, but programs are offered at the University of Alberta and at the University of Calgary.

6. SALARY

According to the 1986 census, the average salary of petroleum engineers working full time was $41,417.

AEROSPACE ENGINEERS 2155

Examples: Aerospace Engineer, General Engineer, Flight Test Engineer, Flight Support Engineer, Design and Development Engineer, Aerodynamics Engineer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,440	2,505	1,065	515	1,580

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
15	-	-	420	435

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	1.2	6.0	Under 25 years	-	-	Full-time	-	98.8
Males	98.8	94.0	Over 54 years	-	-	Part-time	-	1.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation Equip. Ind. (68)
- Aircraft & Aircraft Parts (68)

Transportation (14)
- Air Transport (12)
- Serv. Incidental to Air Trans. (2)

Electrical Machinery Man. (11)
- Communication Equip. (11)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate. Employment in this occupational group is more subject to variations than other engineering specialties because of the fluctuations characterizing the aerospace industry. On average, however, the outlook appears to be relatively bright for this group. Technological advances and changes in the regulations could have a positive effect on the demand for aerospace engineers. Concern about increased air security has prompted regulatory changes affecting the aviation industry. This situation could increase the demand for the expertise of aerospace engineers because of the different designs required for aircraft and aircraft parts and the changes that must be made to older aircraft. The modifications associated with the application of new aircraft technologies require engineers with a knowledge of information technologies, expert systems, metals, composite metals and electronic components. The development of such software packages as those applied to maintenance, is an area that could provide interesting employment opportunities. Technological changes have affected the tasks of these engineers but have had very little effect on their numbers. The increasingly widespread use of computer-assisted design means that knowledge of this work tool is a major asset for these professionals.

5. EDUCATION AND SKILLS

Many aerospace engineers have a diploma in mechanical, aeronautical or aerospace engineering. At present, there is no recognized program in aerospace engineering available in Canada, though courses in this area are offered as electives in numerous mechanical engineering or science programs. Membership in the Order of Engineers is mandatory for those who wish to work as engineers and use the title. Two years' experience under the supervision of an engineer who is already a member of the Order is necessary.

6. SALARY

According to the 1986 census, the average salary of aerospace engineers working full time was $39,704.

ARCHITECTS AND ENGINEERS, NOT ELSEWHERE CLASSIFIED (PLUS AGRICULTURAL ENGINEERS) 2159

Examples: Ceramics Engineer, Geological Engineer, Forest Engineer, Naval Architect and Engineer, Agricultural Engineer

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
3,210	4,080	870	650	1,520

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
135	-	-	2,020	2,155

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	-	94.6	Under 25 years	-	-	Full-time	-	96.8
Males	-	5.4	Over 54 years	-	-	Part-time	-	3.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Business Services (43)
- Eng. & Scient. Services (41)
- Mgmt. Cons. Off. (2)

Pulp and Paper (3)
- Pulp and Paper Mills (3)

Gov't Service (11)
- Other Federal Service (2)
- Provincial Service (8)
- Local Gov't Service (1)

Electrical Machinery Ind. (3)
- Communication Equip. (3)

Forestry (7)
- Logging (4)
- Forestry Services (3)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate, and the labour supply should exceed the demand. Growing concern on the part of the public and government about environmental protection should boost job prospects for forest engineers. These engineers are increasingly called on to manage forests by taking into account all of the forest's resources. A new area of expertise is opening up: integrated resources management, including silviculture, harvest and production activities. The establishment of access paths, their maintenance, the management of forest development sites and, as a result of the new law, the reforestation of cutting zones, are all activities in relation to which forest development companies have no alternatives. Consequently, the demand for forest engineers should remain steady. New technologies may encourage more intensive research in such promising sectors as silviculture, biotechnology, artificial renewal of forests, genetic science, biomass production, remote sensing, forest protection and computer forestry applications.

4. LABOUR MARKET TRENDS (cont'd)

The increasingly widespread use of computerized geographic information systems (GIS) in forest management is making the tasks of engineers easier. These systems add computerized maps to forest management, planning and inventory software. The resulting information combinations make it possible for engineers to quickly access information on a particular land area and make the required modifications without doing everything manually. Knowledge of these computer tools is an asset for engineers. The demand for naval architects and engineers depends on the government's orders for ships. These engineers are few in Canada and it appears that the market will remain very small. The outlook for agricultural engineers is related to the demand for agricultural equipment, which depends on the growth of the agricultural sector. The outlook appears bright in this area. Research and development in the farm mechanization sector could spur job prospects for these engineers. Their expertise, both in hydraulics and in land management is still in demand. New fields of activity such as private consultations in agriculture, agri-food, farm management and rehabilitation for the farming of damaged sites have grown in scope. The sectors of rural construction and habitat control for animals and plants are growing. International development may continue to create openings for rural engineering specialists. The demand for geological engineers is directly related to the metals, oil and gas market. Because of low metal prices, the employment outlook for the latter may remain dim. An aptitude for mathematics and sciences as well as an ability to communicate are assets for aspiring engineers.

5. EDUCATION AND SKILLS

Entry to this occupational group requires university training in an engineering discipline. Membership in the Order of Engineers of Quebec is mandatory in order to work as an engineer and to use the title. Candidates must work for two years under the supervision of an engineer who is already a member of the Order before they are granted professional recognition.

6. SALARY

According to the 1986 census, the average salary of engineers working full time was $35,028, while agricultural engineers earned $32,959.

SURVEYORS 2161

Examples: Surveyor Helper, Marine Surveyor, Pipeline Surveyor, Topographic Surveyor, Instrument Man, Stake Person

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
3,370	3,235	-135	395	260

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
560	200	290	-	1,050

OTHER IMPORTANT REQUIREMENTS

These occupations are affected by technological change.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	3.3	5.4	Under 25 years	33.0	-	Full-time	95.7	96.2
Males	96.7	94.6	Over 54 years	4.6	-	Part-time	4.3	3.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Business Services (40)
- Scientific Studies and Services (40)

Construction Ind. (20)
- Building Construction (2)
- Highway, Bridge and Street Construction (12)
- Other Construction (3)
- Special-trade Contractors (3)

Gov't Service (17)
- Other Federal Service (2)
- Provincial Service (8)
- Local Gov't Service (7)

Transportation (6)
- Highway and Bridge Maintenance (6)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a rate well below the average given the outlook in the public administration and construction sectors. Employment prospects will result solely from the requirement to replace employees in existing jobs. The labour supply may exceed the expected demand. New technologies have had an impact on surveying work. Technological innovations make it possible to take more precise measurements more rapidly. Computers can be used to analyse field measurements and to trace maps and charts. Repetitive tasks such as correcting and altering drawings, filing, copying and making working drawings have been eliminated. Qualifications are being raised, especially with respect to the use of these new technologies. New surveying techniques have had the effect of increasing productivity and therefore diminishing demand for these professionals.

4. LABOUR MARKET TRENDS (cont'd)

Aerial surveyors have been particularly affected by technological changes. Remote-operated measuring devices and navigation satellites allow a precise study of the earth. Computer-assisted design systems are used to group data taken from aerial photographs, and plans and maps are stored in memory.

Surveyors will be increasingly required to combine technical expertise in natural resources management with land information. Knowledge of natural resources management is an asset for surveyors. Knowledge of computerized information systems with spatial reference is increasingly sought after. A large number of those who stop practising this occupation are promoted to supervisory positions in management or administration. Surveyors may be required to work in remote regions. Also, a large part of their work is done in the summer months. Employment opportunities follow a seasonal pattern. Accredited land surveyors are often independent workers who own their own surveying firm.

5. EDUCATION AND SKILLS

The qualifications required vary with the type of job and the region. A university degree in surveying, geodesy or civil engineering is generally required. Membership in the Order of Surveyors of Quebec is mandatory to practise the occupation. For surveying operators (topography) and surveyor helpers, a secondary vocational course in surveying is sufficient. Those with a Diploma of Collegial Studies usually have a specialization in surveying or engineering.

6. SALARY

According to the 1986 census, the average salary of surveyors working full time was $25,955.

DRAUGHTSMEN 2163

Examples: Civil Engineering Drafter, Technical Illustrator, Cartographer, Aeronautical Drafter, Architectural Drafter, Electronic Cartographer, Mechanical Drafter, Computer-Aided Design Drafter

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
8,005	6,780	-1,225	1,045	- 180

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
670	1,095	3,970	-	5,735

OTHER IMPORTANT REQUIREMENTS

Knowledge of computer-aided design is an asset.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	14.7	17.7	Under 25 years	27.4	-	Full-time	98.2	97.9
Males	85.3	82.3	Over 54 years	7.0	-	Part-time	1.8	2.1

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Business Services (34)
- Architects' Off. (7)
- Scientific Studies and Services (26)
- Other Services (1)

Gov't Service (10)
- Other Federal Service (2)
- Provincial Service (3)
- Local Gov't Service (5)

Construction Industry (5)
- Building Construction (2)
- Special-trade Contractors (3)

Electric Power, Gas and Water Utilities (4)
- Electric Power (4)

Machinery Industries (4)
- Misc. Machinery and Equip. Manufacturers (4)

Electrical Products Industries (4)
- Communications Equip. (4)

Transportation Equip. Ind. (3)
- Aircraft and Aircraft Parts Manufacturers (3)

4. LABOUR MARKET TRENDS

The number of employees in these occupations is expected to decline over the next few years, and the labour supply should exceed the demand. The concentration of these jobs in the business services and manufacturing industries sectors makes this occupational group dependent on the economic conditions in these sectors. Computer-aided design and drafting (CADD) has had an impact on the methods being used to design new products. Three-dimensional systems facilitate the design of complex forms and machines. Repetitive tasks such as correcting and altering drawings, filing, copying and making working drawings have been eliminated. Tracing is generally the most automated phase. Technological innovations in the field are changing the labour market for drafters. New design

4. LABOUR MARKET TRENDS (cont'd)

techniques have made it possible for drafters to increase their work output considerably, and this could cause the demand the demand for these specialists to decline, despite the growing requirement for drafting services. Demand in this area will be increasingly for design drafters and a surplus of tracers and less qualified drafters may be expected. Consequently, more advanced skills will be required of drafters in the area of design, production of refined graphics and more precise drawings. Job prospects are better for more qualified drafters who are familiar with computer-aided design and drafting systems.

The introduction of digital cartography has made the tasks of cartographers easier. The computerized geographic or spatial reference information system (GIS or SRIS) makes it possible to manipulate plans and maps on computer and to add useful data to them (e.g. population density). Since modifications to plans and maps no longer need to be done manually, the tasks of cartographers are made considerably easier. Geographic information systems are gradually making inroads into the cartography departments of large companies and of municipalities. Applications for forest management, gas, electricity and telecommunications networks, fire detection and road management are becoming more widespread. Knowledge of GIS is becoming an important asset for cartographers.

5. EDUCATION AND SKILLS

A community college diploma in the relevant field is generally required. For drafters working with computer-aided design, a Diploma of Collegial Studies in architectural technology, civil engineering, mechanics, building or mechanical engineering technology are ways of accessing these occupations. Most workers with a university degree have studied architecture or engineering in particular. Knowledge of computer-aided drafting systems is an asset.

6. SALARY

According to the 1986 census, the average salary of technical drafters working full time was $26,473.

ENGINEERING TECHNOLOGISTS AND TECHNICIANS (PLUS 2164 - ARCHITECTURAL TECHNOLOGISTS AND TECHNICIANS)

2164-2165

Examples: Aerospace Engineering Technician, Electronic and Electrical Engineering Technician, Chemical Technician, Environmental Clean-up Technician, Quality Control Technician, Nuclear Engineering Technologist, Electronic Technician

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
16,500	21,105	4,605	1,805	6,410

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
1,610	175	2,925	425	5,135

OTHER IMPORTANT REQUIREMENTS

Knowledge of new technologies is required.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	5.0	7.6	Under 25 years	28.3	-	Full-time	98.6	98.0
Males	95.0	92.4	Over 54 years	4.6	-	Part-time	1.4	2.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Business Services (11)
- Eng. and Scientific Serv. (11)

Elec. Power, Gas & Water Utilities (10)
- Electric Power (10)

Gov't Service (8)
- Defence Services (1)
- Other Federal Service (1)
- Provincial Service (3)
- Local Gov't Serv. (3)

Electrical Prod. Industry (8)
- Communications Equip. (8)

Construction Industry (5)
- Highway, Bridge & Street Construction (1)
- Other Construction (1)
- Provincial Service (1)
- Local Gov't Service (3)

Wholesale Trade (5)
- Electrical Machinery (3)
- Machinery & Equip., n.e.c. (2)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. More widespread use of computer and other electronic equipment in both the production process and the automated office should ensure good prospects for electrical and electronic engineering technicians. Demand for these technicians should be maintained by the need to repair and maintain this increasingly complex equipment. Qualifications in plan reading and in the application of electricity, electronics, micro-electronics and robotics to production and office automation equipment are in demand. In servicing CAD/CAM and robotic equipment, there is a growing trend toward specialization, and this trend should continue as the range of electronic equipment broadens and the equipment becomes more sophisticated.

4. LABOUR MARKET TRENDS (cont'd)

Qualifications in robot repair and maintenance are increasingly being sought by employers wishing to minimize as much as possible the amount of time during which this costly equipment is immobilized and unproductive. Electronic technicians must be willing to continually upgrade their knowledge; improvements in equipment require a constant effort to keep up to date, particularly in the fields of microprocessing, digital circuits, servomechanisms, video equipment, programmable controllers, telecommunications and data transmission. Technicians specialized in servicing robotic equipment should have a knowledge of electronics, industrial electricity, pneumatics, hydraulics and a wide range of automated equipment. Understanding of the process performed by robots is also necessary. In the case of industrial engineering technicians, demand should be spurred by investment in the motor vehicle industry and the replacement market for public transit equipment. In the long term, economic conditions in the aerospace industry should stimulate demand for aerospace technicians. The ability to read technical drawings is essential. New aircraft technology, particularly in the area of avionics, requires specific technical skills. Technological advances in diagnostic, testing and inspection techniques, particularly non-destructive testing, automatic test equipment, avionic systems and expert systems make the work of these technicians easier. Knowledge of these systems is an therefore an asset. The application of new manufacturing processes and new technologies should generate a need for mechanical engineering technicians qualified in computer applications for business, maintenance mechanics, computer-aided drafting and computer-aided manufacturing (CAD/CAM). The demand for architectural technicians should slow down since employment in this occupation is linked to activity in the construction sector. The anticipated slowdown in residential construction will have an adverse effect on this occupational group, with the exception of the renovation market. However, these technicians can compete directly with architects and have an advantage for certain types of work.

The introduction of computer-aided drafting should change the qualifications required of this occupational group. The industry stresses the need for employees to have good interpersonal skills for dealing with customers, knowledge of business practices, and effective communication skills. Soldering and unsoldering skills are also required. Candidates with managerial and supervisory skills have an advantage.

5. EDUCATION AND SKILLS

A community college diploma in the relevant specialty is required. Training in industrial safety and accident prevention is an asset.

6. SALARY

According to the 1986 census, the average salary of engineering technologists and technicians working full time was $24,495.

MATHEMATICIANS, STATISTICIANS AND ACTUARIES 2181

Examples: Statistician-Analyst, Insurance Company Actuary, Sampling Expert, Demographer, Finance Statistician, Quality Control Analyst

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,465	1,740	275	305	580

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
40	-	-	780	820

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	26.7	33.2	Under 25 years	13.2	-	Full-time	98.5	95.4
Males	73.3	66.8	Over 54 years	8.1	-	Part-time	1.5	4.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Service (23)
- Other Federal Serv.(11)
- Provincial Serv. (11)
- Local Gov't Serv. (1)

Education (5)
- Universities and Colleges (5)

Business Services (21)
- Scientific Studies and Services (1)
- Management Consulting Services (14)
- Other Services (6)

Transportation (5)
- Railway Transport (5)
- Financial Industries (21)

4. LABOUR MARKET TRENDS

Employment should grow at about an average rate. The demand for mathematicians, actuaries and statisticians will depend on the outlook for the finance, insurance, real estate, public administration and business services sectors. Budget restrictions could dim the employment outlook for public administration. Given the increased use of sub-contracting services, the business services sector provides better opportunities. The employment outlook for actuaries should be bright. Nonetheless, the increase in the number of actuaries may give rise to a progressively more saturated market in the traditional area of life insurance. Deregulation of financial services tends to expand the role of actuaries, as their expertise is useful in various types of financial services. With the increased competition in the area of insurance and financial products and the proliferation of new insurance products, the actuary's tasks extend to the marketing of insurance. The growing demand in the field of risk management opens up new areas for actuaries: pension funds, remuneration, fringe benefits, cash

4. LABOUR MARKET TRENDS (cont'd)

management, investment strategy and portfolio management. For this group of professionals a knowledge of computer tools in their area is an asset.

5. EDUCATION AND SKILLS

A university degree is generally required for these occupations. To be an actuary, a bachelor's degree in an actuarial program is preferable. To be a recognized actuary, it is necessary to have a fellowship in the Canadian Institute of Actuaries and to have passed the series of ten exams set by the institute. The university program prepares students for the first five exams.

6. SALARY

According to the 1986 census, the average salary of mathematicians, statisticians and actuaries working full time was $36,662.

SYSTEMS ANALYSTS, COMPUTER PROGRAMMERS AND RELATED OCCUPATIONS

2183

Examples: Computer Programmer, Computer Technician, Automated Graphics Specialist, Simulation Systems Analyst, Accounting Methods Analyst, Machine-Tool Numerical Adjustment Programmer, Mini- and Micro-computer Specialist

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
32,900	51,547	18,645	5,770	24,415

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
1,200	305	5,925	9,980	16,210

OTHER IMPORTANT REQUIREMENTS

The software design market offers good opportunities.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	34.1	35.9	Under 25 years	27.8	-	Full-time	98.1	96.3
Males	65.9	64.1	Over 54 years	1.8	-	Part-time	1.9	3.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Business Services (24)
- Computer Services (21)
- Scientific Studies and Services (2)
- Management Consulting Services (1)

Gov't Service (16)
- Other Federal Service (4)
- Provincial Service (10)
- Local Gov't Service (2)

Finance and Insurance (11)
- Banks (5)
- Insurers (6)

Education (6)
- Elem. and Sec. Schools (2)
- Universities and Colleges (4)

Transportation (4)
- Railway Transport (4)

Communications (3)
- Telephone Systems (3)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a rate slightly above the average. Widespread use of computers, robots and numerically controlled tools should spur demand for these professionals. The requirement will be greater for highly qualified systems analysts and computer programmers, for those who can train users and for sales representatives. Less qualified candidates may have difficulty entering the labour market, all the more so since the number of applicants for these types of jobs will remain very high. The demand will be greater for software designers and less for lower-skilled programmers, who face a more limited market. The software market is changing the computer market. Now, it is the software market that is ahead of the computer equipment market rather than the reverse. Opportunities may open up in certain areas of software design. These areas include hospital and

4. LABOUR MARKET TREND (cont'd)

medical management, billing by health professionals, land use planning, cartography, public safety, inventory management, production management (CAD, CAE), technologies related to databases, especially with respect to data accuracy and computer security, expert systems, the relationship between micro-computers and mainframes, project management, personnel and budget management and multi-user systems.

The introduction of "software packages," ie fully prepared applications software, is cutting into demand, especially from small businesses, which tend to buy these less-expensive systems. SMBs equipped with micro-computers are seeking versatile candidates who are skilled in computer repairs, software installation, computer maintenance, user training and possibly in the writing of small application programs. In SMBs the demand appears to be greater for college-level analysts than for programmers.

Computer consulting offices may open up opportunities, particularly for systems analysts and programmers who can train personnel and do customized programming.

The information industry will continue to provide openings in such related occupations as database manager, information systems engineer and information scientist. There's new demand in areas such as software testing, power supply, radio frequency, microtechnology and artificial intelligence. Sales is also an area in which opportunities are opening up.

In addition to technical skills, personal qualities such as an ability to communicate, maintain good personal relations and adapt are also sought-after.

Overall, technological progress has been a boon to computer programmers and systems analysts. The availability of less expensive information systems has made it possible to implement specialized and easy-to-use applications and has created new job openings for database managers, programmers, information specialists and information systems and software engineers.

5. EDUCATION AND SKILLS

A community college diploma in computer science is required, and a university degree in the field is an advantage and is necessary for some jobs. Generally, training for a company's specific computer product involves training courses with the supplier. Managerial skills and familiarity with the company's organization and business objectives are increasingly in demand. Skills in user training are also sought.

6. SALARY

According to the 1986 census, the average salary of analysts, computer programmers and those in related occupations who were working full time was $30,070.

ECONOMISTS

2311

Examples: Market Study Specialist, Agricultural Economist, Development Economist, Labour Economist, Economic Adviser, Market Analyst, Advertising Analyst

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
4,225	5,070	845	845	1,690

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
230	-	-	1,430	1,660

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%) :

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	22.0	29.5	Under 25 years	6.8	-	Full-time	97.4	95.7
Males	78.0	70.5	Over 54 years	8.5	-	Part-time	2.5	4.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Service (41)
- Other Federal Serv. (11)
- Provincial Gov't Serv. (27)
- Local Gov't Serv. (3)

Transportation (3)
- Railway Transport (3)

Business Services (13)
- Accountants' Off. (1)
- Scientific Studies and Services (2)
- Management Consulting Services (7)

Electric Power, Gas and Water Util. (3)
- Electric Power (3)

Finance, Insurance, and Real Estate (8)
- Banks (5)
- Insurance Carriers (2)
- Insurance and Real Estate Agencies (1)

4. LABOUR MARKET TRENDS

Employment should grow at a rate slightly above the average. The demand for economists will depend on job opportunities in public administration and in the business services sector where most economists are employed. Job openings will be more limited in the public administration sector owing to budget cuts. Nonetheless, services in the private sector are increasingly being solicited by different levels of government and may provide better employment prospects for economists. Knowledge of and experience in quantitative and statistical analysis and in computer science are in demand. The outlook for specialists in natural resources, transportation and international economics appears to be more promising. Opportunities may open up in tax planning, foreign exchange, management and writing. With the introduction of computer technology and software packages, the duties of economists are changing. As mathematical calculations and the processing of large volumes of data are being taken over by the computer, analysis and the preparation and writing of texts and reports are assuming more importance.

5. EDUCATION AND SKILLS

A university degree with a specialization in economics is generally required. However, advanced studies are increasingly becoming an asset.

6. SALARY

According to the 1986 census, the average salary of economists working full time was $36,561.

SOCIOLOGISTS, ANTHROPOLOGISTS AND RELATED SOCIAL SCIENTISTS 2313

Examples: Anthropologist, Criminologist, Social Ecologist, Archaeologist

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
680	830	150	110	260

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
145	-	-	-	145

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	41.3	47.9	Under 25 years	12.0	-	Full-time	95.3	91.9
Males	58.7	52.1	Over 54 years	2.8	-	Part-time	4.7	8.1

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Service (34)
- Other Federal Serv. (14)
- Provincial Serv. (17)
- Local Gov't Serv. (3)

Education (16)
- Elem. and Sec. Schools (1)
- Universities, Colleges (14)
- Libraries and Museums (1)

Business Services(15)
- Accounting Services (1)
- Scientific Studies and Services (6)
- Management Consulting Services (3)
- Other Services (5)

Health and Social Services (15)
- Hospitals (3)
- Other Health Care Institutions (12)

4. LABOUR MARKET TRENDS

Employment should grow at a rate slightly above the average, and an oversupply of labour is expected. The increased demand for social services may give rise to new job openings. The outlook is better for sociologists who have experience in quantitative analysis. The surplus of sociologists and highly qualified candidates make the market very competitive and graduates with only a bachelor's degree will have difficulty finding jobs as sociologists.

5. EDUCATION AND SKILLS

A university degree in sociology, criminology or anthropology is usually required. A master's or doctoral degree are necessary for some positions.

6. SALARY

According to the 1986 census, the average salary of sociologists, anthropologists and related specialists working full time was $31,898.

PSYCHOLOGISTS 2315

Examples: Child Development Consultant, Social Psychologist, Ergonomist, Psychometrician, Clinical Psychologist, Psychologist (other)

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
3,845	4,870	1,025	885	1,910

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
185	-	-	2,640	2,825

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	52.3	58.2	Under 25 years	7.4	-	Full-time	87.6	78.9
Males	47.7	41.8	Over 54 years	3.7	-	Part-time	12.4	21.1

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Services (56)
- Hospitals (21)
- Other Health Care Inst. (15)
- Physicians' Off. (2)
- Off. of Para-Medical Personnel (15)
- Diagnostic Services n.e.c. (3)

Education (35)
- Elem. and Sec. Schools (28)
- Post-Secondary Education (2)
- Universities and Colleges (5)

4. LABOUR MARKET TRENDS

Employment should grow at an above-average rate. The demand for psychologists is stimulated by constantly changing social and economic conditions. Those specialized in clinical psychology should enjoy the best employment opportunities. The neuropsychology sector provides interesting openings. With the growth of alternative forms of therapy and their gradual integration into the health system, the demand for psychologists may be boosted, especially in the areas of visualization, stress management, touch therapy, etc. The aging population could spur the demand for psychologists working in the area of gerontology. The impact of technological changes on the labour force are causing new markets to open up in companies. Employee assistance, personnel training or work organization programs may require the expertise of psychologists.

4. LABOUR MARKET TRENDS (cont'd)

Increased concern on the part of the public about issues related to metal health may spur the expansion of the mental health intervention and prevention sectors, and so increase the use of the professional services of psychologists.

The increased concern with detecting learning disorders very early could increase the demand for other types of psychologists in schools. Employment will increasingly include contract or part-time work.

Generally speaking, psychologists may change their area of specialization relatively easily since it is up to them to decide whether or not to continue their training.

5. EDUCATION AND SKILLS

A master's degree in psychology is necessary and a doctorate in psychology is frequently required. Membership in the Quebec Association of Psychologists is mandatory for those who wish to become recognized psychologists. Clinical psychologists and counsellors must also complete a training period and an internship.

6. SALARY

According to the 1986 census, the average salary of psychologists working full time was $35,421.

OCCUPATIONS IN SOCIAL SCIENCES, N.E.C. 2319

Examples: Urban Geographer, Political Scientist, Urban and Regional Planner, Urban-Renewal Planner, Urban Planning Technician

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,260	2,440	180	600	780

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
250	45	-	500	795

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	-	47.9	Under 25 years	-	-	Full-time	-	85.7
Males	-	52.1	Over 54 years	-	-	Part-time	-	14.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Service (31)
- Other Federal Service (12)
- Provincial Service (14)
- Local Gov't Service (5)

Health and Social Services (6)
- Hospitals (2)
- Related Health Care Inst. (3)
- Misc. Health Services (1)

Business Serv. (16)
- Advertising Services (2)
- Eng. and Scient. Services (5)
- Mgmt. Cons. Offices (2)
- Misc. Business Services (7)

Misc. Services (9)
- Labour Org. (2)
- Misc. Services, n.e.c. (7)

4. LABOUR MARKET TRENDS

Employment in this occupational group is expected to remain relatively stable. Job openings will result mainly from attrition of the present labour force. The use of new software in the area of urban planning could facilitate the work of professionals such as geographers, urban planning technicians, urban planners and other urban planning specialists. Geographic information systems or spatial reference information systems, combining computer technology and geographic data, could change land management work. Plans and maps can be manipulated on computer and complementary information can be added to them. Decision-making concerning the type of planning that will be implemented can therefore be speeded up. For land-use planners, knowledge of computer-aided drafting is an asset. With growing public concern about quality of life and the urban environment, the tasks of urban planners could shift toward education campaigns directed at the public and government. Skills in communication,

4. LABOUR MARKET TRENDS (cont'd)

formulating issues in layman's terms, leadership, and the ability to stimulate participation in public debates on land use are assets for these professionals.

5. EDUCATION AND SKILLS

Entry to these occupations usually requires a specialized university degree. In some occupations a master's degree is necessary.

6. SALARY

According to the 1986 census, the average salary of workers in this group who were employed full time was $31,898.

SOCIAL WORKERS 2331

Examples: Geriatric Social Worker, Parole Officer, Case Supervisor, Family Counsellor

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
9,540	11,335	1,795	2,675	4,470

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
1,040	-	520	2,815	4,375

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	61.8	68.5	Under 25 years	4.4	-	Full-time	91.4	88.7
Males	38.2	31.5	Over 54 years	7.7	-	Part-time	8.6	11.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Serv. (61)
- Hospitals (6)
- Other Health Care Inst. (51)
- Diagnostic Serv., n.e.c. (4)

Gov't Serv. (31)
- Other Federal Service (6)
- Provincial Service (20)
- Local Gov't Serv. (5)

4. LABOUR MARKET TRENDS

Employment should grow at an average rate, and labour supply is expected to exceed demand. Job prospects depend to a large degree on social programs since most jobs are in the public administration and health/welfare sectors. The announced reform in health services should bring about increased home- care services. The trend toward deinstitutionalization and non-institutionalization should boost the demand for social workers in the area of home maintenance and health related resources for the elderly, maladjusted adults, disabled persons and psychiatric patients. The tasks of social workers at the level of government are increasingly shifting toward protection and their role toward that of legal administration and protection officer. Knowledge of the law is an asset. The private services sector is also starting to provide job openings. Volunteer work is one way of acquiring the skills needed to pursue a career in this area. Although not mandatory, social workers may register themselves with a licensing body.

4. LABOUR MARKET TRENDS (cont'd)

Under the combined effect of the lower birth rate and increased life expectancy, the aging of the population should lead to a greater need for social services. Jobs should open up for social workers specialized in gerontology.

A saturated public sector has meant that more and more new social work graduates are turning to the community sector. Part-time or occasional work is tending to increase at the expense of full-time permanent jobs.

5. EDUCATION AND SKILLS

A university degree in social work, sociology, criminology or psychology is usually required. A master's degree in social work may be necessary for administrative positions. A diploma in gerontology is granted in about 20 CEGEPs and a 30-credit certificate program is offered in most universities. At the college level, it is mostly people who wish to work with the elderly who enrol in the program, while at the university level the program is primarily addressed to health care professionals.

6. SALARY

According to the 1986 census, the average salary of social workers working full time was $27,906.

OCCUPATIONS IN WELFARE AND COMMUNITY SERVICES 2333

Examples: Community Service Worker, Recreation Leader, Youth Club Supervisor, Recreation Specialist

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
13,165	17,150	3,985	3,540	7,525

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
1,055	0	250	1,885	3,190

OTHER IMPORTANT REQUIREMENTS

Useful skills may be acquired through volunteer work.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	59.4	65.0	Under 25 years	51.2	-	Full-time	97.6	79.5
Males	40.6	35.0	Over 54 years	4.7	-	Part-time	2.4	20.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Services (36)
- Hospitals (5)
- Related Health Care Inst. (27)
- Diagnostic Services, n.e.c. (4)

Gov't Service (21)
- Other Federal Service (3)
- Provincial Service (4)
- Local Gov't Service (14)

Accommodation and Food Serv. (8)
- Camping Grounds and Trailer Parks (8)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. Current health policies advocating home care and services for the elderly, disabled persons, maladjusted adults and psychiatric patients will increase the demand for specialized personnel working with these groups. For those in occupations related to social work, volunteer work makes it possible to acquire valuable skills and experience. Recreational opportunities are opening up in new workplaces such as factories, private colleges, day care centres and sporting goods retail outlets. A knowledge of management is an asset, given that recreational leaders are called on to manage activities, equipment and sometimes personnel. Recognized qualifications in first aid, lifesaving and a mastery of indoor and outdoor sports are assets for these workers. Many jobs are part time or temporary, often evenings or weekends. Mobility is very important.

5. EDUCATION AND SKILLS

Entry to this occupational group usually requires a community college diploma. For recreation technicians, recreation leaders and camp counsellors a community college diploma in recreation technology is required. For social services assistants, a community college diploma in social work technology is preferable. For household workers, a secondary school diploma in home care assistance is necessary. For recreation specialists, a bachelor's degree in recreology is preferable. Some jobs require a university degree in social work. Volunteer work is one way of acquiring useful skills.

6. SALARY

According to the 1986 census, the average salary of welfare and community service workers working full time was $23,431.

LAWYERS AND NOTARIES 2343

Examples: Lawyer, Notary

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
10,705	12,240	1,535	2,305	3,840

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
200	0	50	1,500	1,750

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	18.5	25.3	Under 25 years	6.0	-	Full-time	95.6	97.0
Males	81.5	74.7	Over 54 years	8.3	-	Part-time	4.4	3.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Business Services (79)
- Lawyers' & Notaries' Off. (79)

Gov't Service (12)
- Other Federal Service (2)
- Provincial Service (9)
- Local Gov't Service (1)

4. LABOUR MARKET TRENDS

Employment is expected to grow at about the average rate. The number of cases in business law, corporate law, securities law, real estate law and international arbitration should increase, thereby improving employment prospects for lawyers specialized in these fields. Other dynamic sectors are constitutional law, consumer protection and family law. The complexity of business regulations, the increase in the patenting of technological innovations, and the definition of rights under family law and the new constitution are all factors that may increase job prospects for lawyers. For lawyers working in these fields, legislative changes will have an impact on the demand for the legal services they are called on to provide. Preventive law could assume a greater portion of lawyers' practices, and their role as negotiators could become more prominent. As data processing systems are used more and more for storing information on legal cases, the ability to use computers is becoming increasingly necessary for lawyers. The role of notaries may shift increasingly toward that of legal counsellor as the need grows for legal security in transactions between individuals and groups.

5. EDUCATION AND SKILLS

Entry to the occupation of lawyer requires a bachelor's degree in law, followed by an eight-month bar admission course, and articling in a legal firm. Membership in the Bar of Quebec is mandatory to be able to practise as a lawyer. Notaries must have a university degree and be members of the Chamber of Notaries to be able to practise the profession.

6. SALARY

According to the 1986 census, the average salary of lawyers and notaries working full time was $39,456.

LIBRARIANS, ARCHIVISTS AND CONSERVATORS 2351

Examples: Librarian, Cataloguer, Archivist, Bibliographer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
4,435	5,885	1,450	2,135	3,585

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
285	-	425	1,185	1,895

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	74.1	76.3	Under 25 years	3.1	-	Full-time	86.5	88.1
Males	25.9	23.7	Over 54 years	14.9	-	Part-time	3.5	11.9

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Education (46)
- Elem. and Sec. Schools (11)
- Post-secondary Inst. (4)
- Universities and Colleges (18)

Health and Social Services (18)
- Hospitals (16)
- Related Health Care Inst. (2)

Gov't Service (18)
- Other Federal Service (3)
- Provincial Service (6)
- Local Gov't Service (9)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. Employment in this occupational group is little affected by economic conditions, but is more sensitive to government spending policies given that most of the jobs in this group are found in government sectors. Chances for employment have been curtailed somewhat in public and educational institutions by government budgetary restraints. The projections given above could be underestimated. Prospects are best for librarians specializing in scientific and technical areas, particularly in research libraries. Non-traditional fields of activity are opening up such as database management, information management and software libraries and may provide job openings. Computer technology has given rise to such new jobs as information broker whose expertise is akin to librarians' expertise and which may create openings for the latter, in the capacity of employees or self-employed workers. Knowledge of computerized information/index systems is in demand since libraries are becoming increasingly computerized. A number of the jobs that are opening up for librarians are part time or require the services of freelancers. Prospects are good for archivists, who work mainly with unpublished materials in both the public and private sectors. Employment opportunities are good for conservators, who are engaged in the physical conservation of documents, as there are few qualified persons to fill the

4. LABOUR MARKET TRENDS (cont')

available positions. Experience in the conservation of the type of collection in their museums or galleries is in demand among employers. Experience in supervision is also an asset since conservators are often required to supervise the storage and installation of artifacts. In general, promotion to the position of conservator supervisor is attained through the positions of assistant conservator and conservator. Conservators may work on their own or establish a consulting firm when they have acquired enough experience and recognition in the conservation milieu. New computer-related technologies and various other technologies have an impact on the tasks of conservators. Knowledge of computer tools in their field is an asset and facilitates conservation research thanks to networks that make it possible to group together permanent public collections.

5. EDUCATION AND SKILLS

A university degree in arts, social sciences or another field and a master's degree in library science are required. Knowledge of computerized cataloguing systems is an asset. The position of conservator requires a minimum of a bachelor's degree and often, a master's degree. General museum experience is an asset. It is recommended that archivists have a master's or a doctoral degree.

6. SALARY

According to the 1986 census, the average salary of librarians, archivists and conservators working full time was $26,381.

TECHNICIANS IN LIBRARY, MUSEUM AND ARCHIVAL SCIENCES 2353

Examples: Paintings Restorer, Document Restorer, Taxidermist, Artifact and Fossil Restorer, Museum Cataloguer, Conservation and Restoration Technician

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,530	1,645	115	515	630

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
120	-	55	125	300

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	77.9	79.8	Under 25 years	18.9	-	Full-time	92.1	90.2
Males	22.1	20.2	Over 54 years	11.2	-	Part-time	7.9	9.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Education (59)
- Elem. and Sec. Schools (17)
- Post-sec. Inst. (5)
- Universities and Colleges (17)
- Libraries and Museums (20)

Gov't Service (24)
- Other Federal Service (6)
- Provincial Service (10)
- Local Gov't Service (8)

Health and Social Services (5)
- Hospitals (5)

4. LABOUR MARKET TRENDS

Employment in this occupational group is expected to remain relatively stable. Jobs will be created mainly through attrition of the present labour force. In small libraries, library technicians execute a range of tasks designed to assist librarians, while in the larger libraries, they are in charge of a particular area such as consultation, cataloguing or book circulation. For a number of years now, new technologies have had an impact on the tasks of these workers. New methods have made it possible to decrease cataloguing expenses, speed up publication distribution and automate most of the library systems. Other technologies such as bar code surveillance make it possible to identify users, while scanning devices help to control and manage stocks by reading the bar codes and entering data automatically. Knowledge of these systems is essential for those wishing to enter this occupational group. The effect of new technologies on the volume of employment is not certain. It is possible that computerized cataloguing and loan systems will open up new jobs for these technicians, but

4. LABOUR MARKET TRENDS (cont'd)

as the public becomes more adept at using these systems, employment growth may slow down, particularly for assistant technicians. Technological changes involving computers and various other technologies will have an impact on museum personnel and, consequently, on museum technicians, particularly in the field of conservation. New technologies are expected to have little effect on the level of employment; rather, it is the qualifications that will be raised. Because of the specialized nature of the recording and classification systems, computers are increasingly being used, and those with a knowledge of microcomputers are in demand, particularly in the larger museums that are likely to acquire computers. In the smaller museums, the wider range of duties and responsibilities require technicians with a general training in a number of specialties. Part-time work is becoming increasingly common in museums.

5. EDUCATION AND SKILLS

A community college diploma in library science technology is generally required. Knowledge of computer cataloguing systems is an asset. For museum technicians, the basic requirement is a community college diploma and often a bachelor's degree in an area relevant to a collection specific to a museum. For paintings, document and artifact restorers, a bachelor's degree in fine arts and a master's degree in restoration, offered in Ontario, or a community college diploma, also offered in Ontario, are necessary. Taxidermy is learnt by apprenticeship.

6. SALARY

According to the 1986 census, the average salary of library, museum and archival technicians working full time was $23,346.

EDUCATIONAL AND VOCATIONAL COUNSELLORS 2391

Examples: Educational Counsellor, Vocational Counsellor

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,380	1,505	125	270	395

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
150	-	-	-	150

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	40.8	44.4	Under 25 years	5.0	-	Full-time	87.0	96.9
Males	59.2	55.6	Over 54 years	6.9	-	Part-time	13.0	3.1

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Education (80)
- Elem. and Sec. Schools (60)
- Post-secondary Inst. (10)
- Universities and Colleges (7)
- Education and Related Serv., n.e.c. (3)

Gov't Service (9)
- Other Federal Service (2)
- Provincial Service (7)

4. LABOUR MARKET TRENDS

Employment in this occupational group is expected to remain relatively stable. Data on projections of the number of graduates are not available. Most of these professionals work in educational institutions and in public administration. The number of jobs in this group depends on school enrolment and government spending. Job prospects could be reduced by generalized budget cuts. However, certain growth factors could offset this situation. At the college and university level, demand for these professionals may rise as ongoing education increases among the over 25 age group. This increased school enrolment could boost the demand for consultation services. The implementation of job equity and affirmative action programs could increase the demand for counsellors who can meet the needs of special clienteles. Unemployment, work adjustment, career changes and preparation for retirement are all areas for public concern which could spur the requirement for consultation services provided by counsellors. Jobs may open up in private practice. The need for educational and vocational counselling could increase in the private sector in the area of human resources services for personnel reorientation, employee training and retraining and career paths for management staff.

5. EDUCATION AND SKILLS

A master's degree in counselling is required. Membership in the Professional Corporation of Guidance Counsellors of Quebec is mandatory to be able to use the title.

6. SALARY

According to the 1986 census, the average salary of educational and vocational counsellors working full time was $37,670.

UNIVERSITY TEACHERS 2711

Examples: Professor, Assistant Professor, Lecturer, Laboratory Demonstrator, Department Chairman

1. LABOUR MARKET FROM 1989 TO 2000

JOBS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
9,750	11,100	1,350	2,450	3,800

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
435	-	-	775	1,210

OTHER IMPORTANT REQUIREMENTS

Only a limited number of permanent personnel are hired.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	26.9	29.8	Under 25 years	4.8	-	Full-time	96.7	94.7
Males	73.1	70.2	Over 54 years	9.5	-	Part-time	3.3	5.3

3. MAIN CHARACTERISTICS (1986 %)

Education (100)
- Universities and Colleges (100)

4. LABOUR MARKET TRENDS

Given the outlook for the education sector, employment is expected to grow at a slightly below average rate. Growth in this sector is influenced by student enrolments and demographic trends. In the first part of the forecast period, the university population is expected to increase slightly owing to enrolments from other school levels and the expansion of continuing education. Moreover, the tight economic situation and new values favouring education and the acquisition of new skills should prompt young people to remain in school for longer periods of time. In the longer term, the demographic trend should have more of an impact and the growth rate in the number of university students should slow down. This is made all the more likely by the possible reductions in government subsidies and the growing popularity of televised university courses. The demand for university teachers may therefore be adversely affected. Only adult education could maintain its enrolment level.

4. LABOUR MARKET TRENDS (cont'd)

The budget cuts which have had an impact on university education have also affected hiring procedures for university teachers. Lecturers rather than permanent full-time professors are increasingly being hired, particularly for the bachelor's level and certificate programs. Nearly half of the undergraduate courses in various universities are given by lecturers. There is also a considerable increase in the number of substitute and visiting professors as well as professors with salary awards. The aging of the teaching force is made even more pronounced by the fact that permanent staff are not renewed.

Since the average age of experienced labour [illegible] is occupation is relatively high, it is expected that the recruitment of candidates to fill job openings due to attrition may be considerable.

5. EDUCATION AND SKILLS

A master's degree is the minimum requirement. Nonetheless, as competition is becoming increasingly brisk, a doctorate in the relevant specialty is almost indispensable.

6. SALARY

According to the 1986 census, the average salary of university teachers working full time was $46,091.

ELEMENTARY AND KINDERGARTEN TEACHERS 2731

Examples: Kindergarten/Day Care/Pre-Kindergarten Worker, Elementary School Teacher, Kindergarten Teacher

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
41,870	46,500	4,630	10,280	14,910

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
2,840	450	2,335	9,750	15,375

OTHER IMPORTANT REQUIREMENTS

The demand for teachers is adversely affected by the decline in the population.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	87.5	84.4	Under 25 years	6.0	-	Full-time	97.8	95.2
Males	12.5	15.6	Over 54 years	5.1	-	Part-time	2.2	4.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Education (88)	Health and Social Services (11)
- Elem. and Sec. Schools (88)	- Other Health Care Institutions (11)

4. LABOUR MARKET TRENDS

Employment should grow at a below-average rate for elementary and preschool teachers, with an oversupply of qualified labour expected over the next few years. The period of decline that the Quebec school system entered following the decrease in the school population, which led to the closing of some schools and a reduction in teaching staff, should continue over the next few years, although at a much slower rate. The decreasing population should continue to have a negative impact on enrolments until the end of the forecast period both at the preschool and elementary levels. The demand for teachers should decrease as a result.

The teaching force is aging, and those who have positions tend to hold them for longer periods of time. The placement of older teachers in vacant positions owing to relocation provisions for surplus teachers makes the employment outlook less promising for young graduates. Furthermore, graduates from previous years who did not enter the profession or who worked in part-time teaching jobs are making the market more competitive.

4. LABOUR MARKET TRENDS (cont'd)

The marked aging the teaching force will lead to a rapid increase in the number of positions vacated by retiring teachers. However, teachers retire around age 55 on average and forecasts indicate that the average age of teachers in 1995 will be 47 years. It would be necessary to wait until the end of the forecast period before vacancies due to retirement will have any significant effect on the demand for young teachers.

Despite the oversupply of teachers at the elementary level, some specialists such as teachers of English as a second language, French as a second language and physical education are very much in demand. Enrolments in these specialties remain low and these positions can be filled only by specialized teachers with a year of training in the subject being taught.

Employment opportunities are opening up outside Quebec owing to the increase in French immersion programs which boosts demand for francophone graduates.

Outside the school systems, physical education, adult education and educational technology are providing new opportunities.

Part-time work in the form of supply teaching and specialized education (music, art) should also be taken into account. Technological progress (computers as advanced educational tools) are improving teaching methods, but technology is not expected to have an impact on the employment situation.

The outlook is positive for day-care workers. Increased participation of women in the job market may boost demand for day-care workers and kindergarten teachers.

5. EDUCATION AND SKILLS

A university degree in education, teacher training, is necessary to teach at the kindergarten and elementary-school levels. For admission to a teacher training program, either a community college diploma, a teaching permit or teaching experience is required. In order to qualify for the two-year probationary period, candidates must be employed either full time or part time by a school recognized by the Department of Education of Quebec. The certificate specifies the level and field of education.

For day-care workers, a community college diploma in day-care education technology is an asset.

6. SALARY

According to the 1986 census, the average salary of teachers working full time was $28,000, while two years after graduation, 1988 graduates earned and average salary of $20,960 for a full-time position.

SECONDARY-SCHOOL TEACHERS 2733

Examples: Substitute Secondary-School Teacher, Secondary-School Teacher

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
31,245	28,430	2,815	5,440	2,625

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
2,630	-	20	6,605	9,255

OTHER IMPORTANT REQUIREMENTS

Retirements should begin having a positive impact on the demand for teachers only at the end of the forecast period.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	46.7	48.7	Under 25 years	2.8	-	Full-time	98.9	96.5
Males	53.3	51.3	Over 54 years	6.3	-	Part-time	1.1	3.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Education (100)
- Elem. and Sec. Schools (100)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a below-average rate. The decrease in the school population due to Quebec's declining birth rate has caused schools to close down and reduced the number of teachers. In addition, available positions have been filled by teachers aged 30 and over instead of young graduates, owing mainly to relocation provisions for surplus teachers. In the long term, the aging of the teaching force should increase job opportunities for young graduates but retirements will begin to have a significant impact only after the year 2000, ie after the end of the forecast period.

Two major factors tend to boost the demand for secondary-school teachers. The first factor is demographic in nature. As a consequence of the period of increased births, enrolments should gradually increase at the secondary level in general. Enrolments at the vocational secondary level should increase as a result of the impact of new vocational training policies which makes completion of the vocational diploma more rigorous in terms of length of training.

4. LABOUR MARKET TRENDS (cont'd)

The teaching of English as a second language, French as a second Language, English language arts, mathematics, and sciences should provide good opportunities. Part-time and by-the-lesson teaching and occasional substitute teaching should make it easier for candidates to enter the school system.

The growth of French immersion programs outside Quebec will increase the demand for teachers trained in this field and should provide job opportunities throughout Canada.

5. EDUCATION AND SKILLS

A university degree in secondary-school education with specialization in the subject being taught or a university degree in a relevant field plus a one- or two-year course in education is required. A two-year probationary period is necessary to obtain a permanent teaching certificate. In vocational specialties, candidates can become qualified teachers either by obtaining a vocational teaching certificate after completing a community college diploma in the subject or by obtaining a trade certificate in the case of trades for which a provincially regulated apprenticeship program exists.

6. SALARY

According to the 1986 census, the average salary of secondary school teachers working full time was $32,790. According to the 1988 National Graduate Survey, graduates working full time as secondary-school teachers earned an average salary of $22,735.

ELEMENTARY AND SECONDARY SCHOOL TEACHING AND RELATED OCCUPATIONS, NOT ELSEWHERE CLASSIFIED

2739

Examples: Adult-Education Teacher, Secondary-School Teacher, Visiting Teacher, Tutor, Study Supervisor

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
6 415	7,955	1,540	2,045	3,585

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
430	-	-	5,530	5,960

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	66.4	70.0	Under 25 years	7.5	-	Full-time	-	81.6
Males	33.6	30.0	Over 54 years	6.8	-	Part-time	-	18.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Education (96)
- Elem. and Sec. School (96)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate, with labour supply exceeding demand. As with elementary- and secondary-school teachers, enrolments will affect the employment prospects of this group of teachers. Openings in part-time and by-the-lesson jobs should provide opportunities for this occupational group.

ELEMENTARY AND SECONDARY SCHOOL TEACHING AND RELATED OCCUPATIONS, NOT ELSEWHERE CLASSIFIED

2739

5. EDUCATION AND SKILLS

A university degree in theology may be an asset for pastoral instruction. Candidates with no experience in this field may take a course in pastoral instruction at the Marie-Victorin CEGEP.

6. SALARY

According to the 1986 census, the average salary of teachers working full time was $26,560.

COMMUNITY COLLEGE AND VOCATIONAL SCHOOL TEACHERS 2791

Examples: Vocational Applied Arts Teacher, Welding Instructor, Business College Instructors, Typing Teacher, Commercial Art Teacher, Trade School Instructor

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
12,525	14,395	1,870	2,265	4,135

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
590	-	-	1,345	1,935

OTHER IMPORTANT REQUIREMENTS

Part-time employment should increasingly be taken into consideration.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	38.5	41.0	Under 25 years	3.4	-	Full-time	96.9	94.4
Males	61.5	59.0	Over 54 years	5.0	-	Part-time	3.1	5.6

3. MAIN CHARACTERISTICS PROVIDING EMPLOYMENT (1986 %)

Education (95)
- Elem. and Sec. Schools (6)
- Vocational Centres (2)
- Post-secondary Institutions (80)
- Universities and Colleges (3)
- Education and Related Services, n.e.c. (4)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an average rate. During the 1970s, employment for CEGEP teachers recorded a very high growth rate. This growth reflected the increase in community college enrolments and the increase in the number of school establishments. The situation has stabilized in both cases and the growth rate will be rather moderate over the forecast period.

4. LABOUR MARKET TRENDS (cont'd)

The growing demand for continuing education, the increased number of paid holidays and the growing popularity of general interest courses among adults should maintain employment opportunities for these professionals. Moreover, the need for retraining and technical training resulting from the impact of technological changes is becoming increasingly urgent and should improve job prospects.

Part-time work should be taken into account since these teachers are hired either for several terms, on contract or for short periods of time. Many colleges offer a large selection of summer courses. Technological progress has had an impact on teaching methods thanks to the use of computers and, in technical classes, of specific equipment. Nonetheless, as in other teaching sectors, technological changes are not expected to affect the employment outlook.

5. EDUCATION AND SKILLS

To teach in a community college a university degree in the relevant subject and a teaching certificate are required. For technical and technological subjects, a community college diploma or university degree in the subject being taught plus three years' relevant experience is required.

6. SALARY

According to the 1986 census, the average salary of teachers working full time was $35,677 and that of teachers working part time was $20,609.

FINE ARTS TEACHERS, NOT ELSEWHERE CLASSIFIED 2792

Examples: Music Professor, Art Instructor, Drama Instructor, Dance Instructor

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
3,735	4,240	505	1,430	1,935

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
445	0	0	835	1,280

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	68.3	71.6	Under 25 years	20.9	-	Full-time	78.7	71.3
Males	31.7	28.4	Over 54 years	12.4	-	Part-time	22.3	28.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Teaching (68)
- Elem. and Sec. Schools (21)
- Schools of Art and of the Performing Arts (33)
- Vocational Centres (1)
- Post-Secondary Education (Univ.) (3)
- Universities and Colleges (4)
- Education and Related Serv., n.e.c. (6)

Amusement and Recreation Serv. (15)
- Theatrical Services (4)
  - Other Services (11)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a below-average rate. These graduates face a difficult labour market owing to both the small number of positions which will become available and the placement of surplus teachers which is given priority by relocation provisions for these teachers. For teaching at the elementary and secondary school levels, art instructors are required to have general training for teaching both levels and in specialized teaching in two art specialties for teaching at the elementary level.

5. EDUCATION AND SKILLS

On-the-job training, a community college diploma or a university degree are recognized qualifications for drama instructors. In order to teach in a drama school, candidates must be graduates of a well-known theatre school, be recognized by their peers and be engaged in a professional career. A college diploma in dance and ballet or a university degree in dance is required to work as a dance instructor. To teach dance, candidates must have completed a minimum of 100 hours of classes.

6. SALARY

According to the 1986 census, the average salary of art instructors not elsewhere classified who were working full time was $27,860.

TEACHERS OF EXCEPTIONAL STUDENTS, NOT ELSEWHERE CLASSIFIED 2795

Examples: Teacher of Mentally Handicapped Persons, Teacher of the Blind, Teacher of Physically Handicapped Persons

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
9,600	11,205	1,605	2,235	3,840

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
915	-	2,650	20	3,885

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	63.8	67.8	Under 25 years	25.0	-	Full-time	91.8	85.8
Males	36.2	32.2	Over 54 years	3.1	-	Part-time	8.2	14.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Education (32)
- Elem. and Sec. Schools (32)

Health and Social Services (60)
- Hospitals (11)
- Other Health Care Inst. (48)
- Diagnostic and Therapeutic Serv. (1)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate, with labour supply exceeding demand. Despite the expected decline in enrolments at the elementary level, the growing concern to correct learning problems is having a positive impact on the demand for teachers of the physically disabled. Because of relocation provisions for surplus teachers, the hiring of experienced teachers with a certain amount of training in remedial education makes the employment situation more difficult for new graduates in the field. Available openings are increasingly contract, supernumerary and part-time jobs. Society's growing acceptance of physically and mentally disabled persons may contribute to better employment prospects for these professionals. Bilingual candidates may find job opportunities outside Quebec.

5. EDUCATION AND SKILLS

A community college diploma in special education technology is required to work as a special education assistant. Employers prefer candidates who are 25 years of age and over. The completion of a practical training period helps candidates enter the labour market. Hospitals require a medical certificate. For teachers of hearing-disabled, seeing-disabled or mentally-disabled persons, a bachelor's degree in remedial education or psycho-education is recommended. This specialty is offered in the context of preschool, elementary and secondary school education programs at the university level. For teachers of mentally- and physically-disabled persons, a bachelor's degree in remedial education is necessary as well as a special teaching permit and/or certificate.

6. SALARY

According to the 1986 census, the average salary of teachers in this group was $25,753.

PHYSICIANS AND SURGEONS 3111

Examples: Cardiologist, Dermatologist, General Practitioner, Surgeon, Anesthesist, Pediatrician, Psychiatrist, Gynecologist, Radiologist, Geriatrist, Emergency Physician

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
14,135	15,890	1,755	4,620	6,375

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
105	-	-	2,180	2,285

OTHER IMPORTANT REQUIREMENTS

Forecasts indicate shortages of medical specialists.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	18.4	23.3	Under 25 years	4.6	-	Full-time	96.0	94.4
Males	81.6	76.7	Over 54 years	16.9	-	Part-time	4.0	5.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Services (96)
- Hospitals (39)
- Related Health Care Inst. (2)
- Physicians' Off. (53)
- Diagnostic and Therapeutic Care, n.e.c. (2)

4. LABOUR MARKET TRENDS

Below-average employment growth is forecast. Additional demand for doctors will come primarily from the requirement to fill job openings due to the attrition of labour, and employment growth will be rather slow. The population/physician ratio is not expected to change, but the demand for specific fields of practice may increase while others will decrease. There is a shortage of general practitioners. There is also an acute labour shortage in the areas of psychiatry, anesthesiology and general surgery; and there is a strong demand in nuclear medicine, obstetrics-gynecology, diagnostic radiology and urology. Since the growth of the elderly segment of the population has meant an increase in the number of patients suffering from cardiac problems, the demand for cardiology specialists should increase, all the more so since the supply of physicians in this specialty has not kept up with recent demand. The inadequate monetary compensation for specialties requiring more years of training, the increased risk of malpractice suits, the drop in the number of hours worked by doctors in general, and the "brain drain" of Quebec-trained physicians particularly toward the United States may bring about shortages of qualified medical personnel in certain fields.

4. LABOUR MARKET TRENDS (cont'd)

The aging of the population will affect the future demand for hospital care, which is already starting to make itself felt in some hospitals. Health care consumption as well as the length of time patients remain in hospital tends to increase with age. Moreover, improved life expectancy and the progress that has been made in the treatment of a number of illnesses is putting additional pressure on the demand for health care. The concern with maintaining health is growing. New types of treatment are beginning to emerge such as home care administered by health teams composed of doctors, nurses and family aides, which require an aptitude for team work on the part of doctors.

The field of health care is affected by technological innovations. The introduction of new technologies has had the greatest effect on radiodiagnosis, radiotherapy and nuclear medicine. Often, it is a computer incorporated into the machine itself that directs, controls and processes examination data. An understanding of the principles underlying and knowledge of the use of new devices is an asset for young physicians.

There is a demand for doctors in remote regions, especially for specialists such as surgeons.

5. EDUCATION AND SKILLS

A university degree in medicine and clinical training in a hospital are required. Membership in the Order of Physicians of Quebec is mandatory.

6. SALARY

According to the 1986 census, the average salary of physicians working full time was $55,311. According to the 1988 National Graduate Survey, respondents earned an average of $48,715 two years after graduation.

DENTISTS 3113

Examples: Dentist, Oral Surgeon, Orthodontist, Periodontist

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,885	3,390	505	865	1,370

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
5	-	30	1,425	1,460

OTHER IMPORTANT REQUIREMENTS

The employment outlook for these specialists appears favourable.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	10.4	18.0	Under 25 years	4.3	-	Full-time	84.9	93.3
Males	89.6	82.0	Over 54 years	17.4	-	Part-time	*15.1	6.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Serv. (96)
- Hospitals (2)
- Dentists' Off. (91)
- Diagnostic and Therapeutic Serv., n.e.c. (3)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate, and the labour supply should exceed the demand. A tightening of the labour market is anticipated in the major urban centres, while shortages may occur in outlying regions. Most dentists are self-employed. The drop in the rate of tooth decay is linked to a variety of factors, including greater public awareness of the importance of dental hygiene. The scope of dental services is widening all the time, and now encompasses root canal treatment and the fitting of crowns. Dental services are shifting away from treatment and toward preventive care. The monitoring of tooth development and cosmetic dentistry are increasingly becoming the preserve of dentists. The advent of easy-to-use biomaterial has greatly increased the demand for cosmetic dentistry. The employment outlook for orthodontists, periodontists and cosmetic dentistry specialists is bright. The increase in private dental insurance plans and the higher standard of living and education of the general population may improve opportunities for this group. Jobs are also opening up in dental research.

5. EDUCATION AND SKILLS

A university degree in dentistry is required. One or two years' additional training is necessary for specialization. Training for some specialties such as prosthodontics is not available in Quebec. Membership in the Order of Dentists of Quebec is mandatory.

6. SALARY

According to the 1986 census, the average salary of dentists working full time was $47,119.

VETERINARIANS 3115

Examples: Veterinarian

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
970	1,505	535	195	730

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
20	-	130	580	730

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	13.9	35.7	Under 25 years	7.6	-	Full-time	96.3	92.8
Males	86.1	64.3	Over 54 years	8.9	-	Part-time	3.7	7.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Agriculture (70)
- Agricultural Services (70)

Health and Social Serv. (11)
- Physicians' Off. (11)

Gov't Service (7)
- Other Federal Service (3)
- Provincial Service (4)

4. LABOUR MARKET TREND

Above-average employment growth is forecast and the labour market outlook is bright for veterinarians. Nonetheless, it is expected that a labour surplus in relation to the demand will spark keen competition for the available job openings. Veterinary medicine for small animals is expected to grow gradually. There are increasing numbers of companion pets and veterinary care is becoming more and more specialized (ophthalmology, radiology, orthopedics, cardiology, etc.). The grouping together of animal medicine practitioners, the management of clinics and the trend toward preventive medicine are changing veterinary medicine. Prevention is also gaining ground in industrial medicine (large animals). Ongoing training is an asset since new findings in veterinary medicine are growing rapidly and professional development is important. Jobs may open up in meat hygiene and the prevention of diseases that can be transmitted to humans.

5. EDUCATION AND SKILLS

A university degree in veterinary medicine is required. Membership in the Order of Veterinarians of Quebec is mandatory.

6. SALARY

According to the 1986 census, the average salary of veterinarians working full time was $30,521.

OSTEOPATHS AND CHIROPRACTORS

3117

Examples: Osteopath, Chiropractor

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
690	860	170	185	355

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
5	-	-	-	5

OTHER IMPORTANT REQUIREMENTS

Chiropractic training is not available in Quebec.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	27.4	17.2	Under 25 years	71.6	-	Full-time	95.2	89.9
Males	72.6	82.8	Over 54 years	13.2	-	Part-time	4.8	10.1

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Services (98)
- Physicians' Off. (2)
- Off. of Para-medical Personnel (96)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. The labour market outlook is bright for this occupational group. The growing demand for alternative methods of medical treatment and the possibility of reimbursement of expenses linked to chiropractic care by insurance companies may stimulate the demand for chiropractors and osteopaths. Knowledge of new technologies such as ultra-sound, low-voltage simulators and diathermy is an asset. Almost all osteopaths and chiropractors work in a private practice. The growth of this occupational group tends to be restricted by the limited number of students that can be accommodated by the only chiropractic college in Canada and by the tendency of these professionals to complete their studies in the United States.

5. EDUCATION AND SKILLS

Students wishing to become chiropractors must complete a community college diploma in health sciences, one year of sciences at the university level and a four-year program in a chiropractic college. Though not available in Quebec, this program is offered in Ontario, at the Canadian Memorial Chiropractic College or in the United States. Students must undergo clinical training. Tuition fees are very high, even in Canada. Membership in the Order of Chiropractors of Quebec is mandatory. For osteopaths, a university degree in health sciences is a prerequisite to a five-year training in a college for osteopaths. A thesis on a clinical subject must also be presented to an international board.

6. SALARY

According to the 1986 census, the average salary of osteopaths and chiropractors working full time was $29,076.

HEALTH DIAGNOSING AND TREATING OCCUPATIONS, NOT ELSEWHERE CLASSIFIED

3119

Examples : Psychotherapist (all industries), Naturopath, Podiatrist, Naturopathic Physician, Acupuncturist, Kinesiologist

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,955	2,415	460	600	1,060

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
25	-	200	-	225

OTHER IMPORTANT REQUIREMENTS

The public's demand for alternative methods of medical treatment is increasing.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	58.4	57.5	Under 25 years	17.3	-	Full-time	85.9	77.6
Males	41.6	42.5	Over 54 years	8.6	-	Part-time	14.1	22.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Services (90)
- Hospitals (42)
- Related Health Care Inst. (4)
- Physicians' Off. (8)
- Off. of Para-medical Personnel (Practitioners) (33)
- Diagnostic and Therapeutic Serv., n.e.c. (3)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast, with labour supply falling short of demand. In 1985 there were, depending on the definitions used, from 150 to 300 acupuncturists and 300 naturopathic physicians working full time in Quebec. The growing demand for alternative methods of medical treatment may brighten the employment outlook for these occupations. Some alternative methods of health care are making inroads into hospitals and community health establishments, and may create job opportunities for this occupational group.

HEALTH DIAGNOSING AND TREATMENT OCCUPATIONS, NOT ELSEWHERE CLASSIFIED

3119

5. EDUCATION AND SKILLS

The qualifications required for these occupations vary with the specialty. Students wishing to become acupuncturists should have a community college diploma in acupuncture. Those who wish to practise as podiatrists must complete a community health diploma in health sciences and a three- or four-year course of study in podiatry. No podiatry training program is available in Canada, but some colleges in the United States offer a program. Membership in the Order of Podiatrists of Quebec is mandatory.

6. SALARY

According to the 1986 census, the average salary of members of this occupational group who were working full time was $23,426.

NURSES, NURSES REGISTERED, NURSES GRADUATE AND NURSES-IN-TRAINING 3131

Examples: Graduate Nurse, Nurse Consultant, School Health Nurse, Psychiatric Nurse, Nursing Research Specialist

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
59,635	82,035	22,400	17,550	39,950

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
1,680	100	9,640	4,380	15,800

OTHER IMPORTANT REQUIREMENTS

The demand for nurses is constant.

2. MAIN CHARACTERISTICS

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	91.2	92.2	Under 25 years	20.3	-	Full-time	70.9	61.8
Males	8.8	7.8	Over 54 years	4.8	-	Part-time	29.1	38.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Services (95)
- Hospitals (80)
- Other Health Care Institutions (11)
- Physicians' Offices (1)
- Diagnostic and Therapeutic Serv., n.e.c. (3)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate. The demand for nurses is growing. Forecasts point to a relative scarcity of nurses on the job market. The aging population and increased life expectancy may lead to increased demand for nurses in the areas of geriatrics, long-term care and chronic care. The current trend towards providing services outside acute-care hospitals (clinics, rehabilitation and chronic-care centres, senior citizens homes) is likely to create some job opportunities.

4. LABOUR MARKET TRENDS (cont'd)

The trend towards keeping elderly persons at home increases the demand for nurses capable of providing medical support in the home. In addition to the aging population as a factor in the demand for nursing care, the tendency of hospitals to hire nurses at the expense of nursing assistants and the expanding role of nurses in the area of community health could increase the demand even more. Computerization of patients' files, while reducing the amount of work involved in maintaining and evaluating patients' files, could slow down the demand for nurses. Nonetheless, the requirement for specialized nurses should remain strong. In a number of hospitals, shortages now exist in intensive care, cardiology, geriatrics, psychiatry and emergency care. These professionals are constantly in demand in institutions located in remote areas.

5. EDUCATION AND SKILLS

To enter into these occupations, students must complete a community college diploma or a university degree in nursing and pass the exams set by the Order of Nurses of Quebec. New graduates must be prepared to do shift work (day, evening or night shift any day of the week, including statutory holidays and during the summer months). Most jobs are temporary or casual. Most nurses must work for a number of years on a part-time basis, for up to five years, before obtaining a full-time position. Bilingualism is an asset, opening up job opportunities in French-speaking areas of Canada. There are also opportunities outside Canada, notably in the United States.

6. SALARY

According to the 1986 census, the average salary of nurses working full time was $29,387. According to the 1988 National Graduate Survey, the average salary of nurses who were working full time two years after completing their studies was $22,010 if they were university graduates and $21,828 if they were college graduates.

REGISTERED NURSING ASSISTANTS 3134

Examples: Graduate Nursing Assistant, Registered Nursing Assistant, Midwife

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
14,235	15,870	1,635	3,650	5,195

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
1,120	3,790	730	-	5, 640

OTHER IMPORTANT REQUIREMENTS

The proportion of assistant nurses is decreasing in the organization of nursing care.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	88.0	90.2	Under 25 years	24.0	-	Full-time	67.9	58.6
Males	12.0	9.8	Over 54 years	3.9	-	Part-time	32.1	41.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Services (95)
- Hospitals (75)
- Other Health Care Institutions (20)

4. LABOUR MARKET TRENDS

Below-average employment growth is forecast. The employment outlook for these occupations is not bright, despite the presence of positive factors. The growing concern for physical and mental health and the increased demand for quality services on a more personal level could boost the requirement for the services of nursing assistants. Facilities providing less intensive care such as convalescent homes, day-care centres, chronic-care and rehabilitation centres, diagnostic and therapeutic centres, and the increase in home-care programs could create some job opportunities. However, important factors will limit employment growth. Some hospitals are employing increasingly fewer assistant nurses, preferring instead to hire registered nurses. The slight differences in salaries and the increased complexity of the technologies used prompt hospitals to recruit nurses instead of assistant nurses. The proportion of assistant nurses is decreasing and their role appears to be less integrated into the overall organization of nursing care. Full-time jobs are becoming scarcer.

5. EDUCATION AND SKILLS

Completion of the secondary long vocational course in practical nursing and on-the-job training in a hospital are required. Membership in the Professional Corporation of Nursing Assistants of Quebec is mandatory. Many of the jobs in this field are temporary, part-time or casual and may involve shift work (day, evening or night). Geographic mobility is an asset.

6. SALARY

According to the 1986 census, the average salary of nursing assistants working full time was $23,962.

AUDIO AND SPEECH THERAPISTS (INCLUDES PHYSIOTHERAPISTS AND OCCUPATIONAL THERAPISTS)

3136, 3137, 3138

Examples: Audio Therapist, Speech Therapist, Physiotherapist, Recreational Therapist, Occupational Therapist

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
5,700	7,685	1,985	1,745	3,730

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
175	-	600	3,425	4,200

OTHER IMPORTANT REQUIREMENTS

The demand will be positive but the competition brisk.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	-	80.6	Under 25 years	-	-	Full-time	-	79.3
Males	-	19.4	Over 54 years	-	-	Part-time	-	20.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Services (91)
- Hospitals (57)
- Other Health Care Institutions (13)
- Physicians' Offices (2)
- Offices of Paramedical Personnel (Practitioners) (15)

Education (6)
- Elementary and Secondary Schools (6)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate, with labour supply exceeding demand. The aging population, the search for a better quality of life, the greater autonomy of disabled persons and efforts to further their social integration are increasing job prospects for these professionals. The employment outlook is bright for physiotherapists. Given the aging population, the demand for chronic and geriatric care should increase. A gradual increase in the number of chronic patients is expected, which will largely exceed the number of places available in hospitals providing acute and short-term care. The home-care and out-patient clinic system will expand, creating additional demand for physiotherapists in community health. New areas of activity are open to these professionals. For example, physiotherapists are increasingly in demand in schools, industry and sports. Rehabilitation technicians may compete with physiotherapists for certain jobs. In addition to the treatment aspect itself, the role of physiotherapists is expanding to include duties related to prevention, consultation

4. LABOUR MARKET TRENDS (cont'd)

and screening. There is a shortage of physiotherapists almost everywhere in Quebec, particularly in remote regions. Part-time jobs are frequent, especially in the area of home and private care. The trend towards private physiotherapy clinics should continue over the next few years and give rise to new job opportunities.

The establishment of an increasingly closer link between learning problems in childhood and communication disorders should spur the requirement for prevention, evaluation and re-education in the area of learning disorders and stimulate the demand for speech therapists. Geriatrics opens new prospects for specialists in this field as well as for audio therapists. The prevention of hearing and speech problems among elderly persons will become increasingly necessary in the community milieu. New therapeutic approaches are being developed, ie from an approach that treats a group of people with the same type of disorder towards one in which the patient is treated globally by a multidisciplinary team that includes various health workers. Private practice should become more widespread to reflect the growth in the demand for quick and personalized services. The growing trend towards home care, which compensates for the shortage of hospital services, should provide new labour market opportunities for these professionals. The appearance of sophisticated devices, particularly in audiology, has made diagnosis easier for these specialists. In the area of speech therapy as well, computer technology has improved the diagnostic procedure. In addition, the computer is increasingly being used as a tool in re-education. Knowledge of these computerized tools is an asset for speech therapists. These professionals are in increasing demand, especially outside the major urban centres.

New approaches in health care which increasingly feature rehabilitation as a form of care that can replace hospital care, together with greater public awareness of disabled persons could boost the demand for occupational therapists. The role of these therapists is changing. Besides preserving the capacities of the individual who displays a deficit, their tasks are shifting towards preserving the capacities of the healthy individual. Preventive and educational aspects are assuming a more dominant role and could give rise to additional job openings in schools, day-care centres, industry, community service centres and private practice.

5. EDUCATION AND SKILLS

Physiotherapists require a university degree in physiotherapy and occupational therapists, a bachelor's degree in occupational therapy. Audio and speech therapists require a master's degree in speech therapy or audio therapy.

6. SALARY

According to the 1986 census, the average salary of audio therapists working full time was $33,633, of physiotherapists, $31,889 and of occupational therapists, $29,952.

PHARMACISTS 3151

Examples: Pharmaceutical Chemist, Hospital Pharmacist, Industrial Pharmacist, Pharmacist

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
4,220	4,965	750	1,210	1,960

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
65	-	-	1,170	1,235

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	38.8	48.6	Under 25 years	8.7	-	Full-time	91.0	86.2
Males	61.2	51.4	Over 54 years	12.1	-	Part-time	9.0	13.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Retail Trade (73)
- Drug Stores (73)

Health and Social Services (24)
- Hospitals (23)
- Related Health Care Inst. (1)

4. LABOUR MARKET TRENDS

Above-average employment growth is expected. Nearly 2,000 jobs may open up in this occupational group from now until the year 2000, one-third of which will be created by the increased demand for pharmacists' services and the rest through attrition of employees in existing jobs.

In Quebec, only pharmacists may own drug stores. The number of drug stores in urban centres has reached the saturation point, thus restricting employment growth in this area. Independent pharmacists are losing increasingly more ground to large chains and the work of pharmacists is changing. Pharmacists' tasks are shifting away from the products themselves toward greater contact with patients and the clinical aspects of drug use. The growth of the elderly segment of the population means that pharmacists will be dealing with increasingly greater numbers of chronic patients who are significant consumers of medication and health care. This situation, which is linked to the growth of drug therapy, self-medication, home care and preventive and promotional approaches, increases the trend toward clinical work for pharmacists.

4. LABOUR MARKET TRENDS (cont'd)

New technologies such as the computerization of patients' files favour the pharmacist's role as consultant. Computerized files help the pharmacist to quickly identify contraindications and how drugs interact with each other in order to inform patients and provide them with instructions for the use of medication and its side effects. Greater emphasis may therefore be placed on pharmaceutical services as opposed to the product. Knowledge of the computer systems used in the field is an asset for pharmacists.

In hospitals, the demand for clinical departments and the development of pharmaceutical services spur employment opportunities for pharmacists. The requirement for pharmaceutical expertise in hospitals is increasing because of the growing complexity of medical treatments and the proliferation of multidiagnostic and treatment schedules which create a need for close monitoring by pharmacists. Experience, specialization and higher education are often required of pharmacists wishing to work in hospitals. Moreover, the ability to communicate and to work in a group are sought after since pharmacists must work within multidisciplinary teams.

5. EDUCATION AND SKILLS

Graduation from a four-year university course in pharmacy and a postgraduate practical training period are required for membership in the Order of Pharmacists of Quebec. For full-time employment in a health institution, a graduate degree in hospital pharmacy is increasingly required.

6. SALARY

According to the 1986 census data, the average annual salary of pharmacists working full time was $31,910.

DIETITIANS AND NUTRITIONISTS 3152

Examples: Therapeutic Dietitian, Dietitian, Nutritionist, Diet Therapist

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,445	1,715	270	430	700

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
150	-	560	820	1,530

OTHER IMPORTANT REQUIREMENTS

New markets may open up.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	91.5	95.7	Under 25 years	15.1	-	Full-time	89.0	68.6
Males	8.5	4.3	Over 54 years	1.5	-	Part-time	11.0	31.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Services (85)
- Hospitals (68)
- Related Health Care Institutions (7)
- Off. of Para-medical Personnel (Practitioners) (6)
- Diagnostic and Therapeutic Care (4)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a rate slightly above the average, but labour supply should surpass demand. Greater public awareness of the importance of a healthy diet suggests that dietitians will be required in a broader range of fields, reaching beyond therapeutic dietetics to prevention and nutritional education. While most dietitians and nutritionists now work in health care institutions or the food processing industry, they will increasingly be in demand to work as consultants and educators in schools, day-care centres, outdoor recreation centres and community health establishments. New opportunities are also opening up in the area of consumer awareness, with information campaigns designed to promote healthful eating habits. Other employment opportunities may also open up in supermarkets and food cooperatives. However, the labour market outlook appears to be brighter for dietitians than dietary technicians.

4. LABOUR MARKET TRENDS (cont'd)

Technological changes in the dietary sector have not been fully implemented yet. Nonetheless, the gradual computerization of various aspects of hospital activity will have an impact on the tasks of dietary technicians. With the implementation of a single patient file, the link between services and the processing of files will change. This link will allow greater control of the many medical interventions, including those of dietary services, and will reinforce professional relationships with other health care workers. Knowledge of computer systems in the field and their use is an asset for this occupational group. Good communications and teamwork skills are an asset.

Part-time work is fairly common; in 1986, 31% of dietitians and nutritionists were working on a part-time basis.

5. EDUCATION AND SKILLS

A university degree in dietetics and nutrition as well as a training period in a hospital or in community health are required. Membership in the Professional Corporation of Dietitians of Quebec is mandatory for those who wish to use the title of dietitian.

6. SALARY

According to the 1986 census, the average salary of dietitians and nutritionists working full time was $30,925.

OPTOMETRISTS 3153

Examples: Optometrist

1. LABOUR MARKET TREND FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,095	1,300	205	305	510

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
5	-	-	300	305

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	24.3	39.2	Under 25 years	9.5	-	Full-time	100.0	92.2
Males	75.7	60.8	Over 54 years	12.8	-	Part-time	0.0	7.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Services (96)
- Off. of Para-medical Personnel (Practitioners) (96)

4. LABOUR MARKET TRENDS

Forecasts indicate that employment will grow at a rate slightly above the average, and the overall prospects for this occupational group are good. Even though the labour supply has increased, it is expected to fall short of demand. The aging of the population, leading to the increased need for eye care, screening examinations for eye problems and the greater importance given to good vision are factors that should benefit optometrists.

In the short term, technological changes should not modify either the demand for this occupational group or the skills required to practise optometry.

Most optometrists are self-employed. However, there is a trend toward several optometrists grouping together to provide services with more flexible hours. Cooperation with other eye health workers such as government consultants and community health establishments is becoming increasingly frequent.

5. EDUCATION AND SKILLS

A university degree in optometry is required. Membership in the Quebec Association of Optometrists is mandatory.

6. SALARY

According to the 1986 census, the average salary of optometrists working full time was $30,954.

DISPENSING OPTICIANS 3154

Example: Optician

1. LABOUR MARKET TRENDS FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
815	1,080	265	210	475

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
10	-	430	-	440

OTHER IMPORTANT REQUIREMENTS

There is an overall balance between supply and demand, and the employment outlook is bright in outlying regions.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	28.7	38.7	Under 25 years	23.8	-	Full-time	93.5	91.1
Males	71.3	61.3	Over 54 years	5.9	-	Part-time	6.5	8.9

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Misc. Manufacturing Ind. (13)
- Scientific and Prof. Equip. Ind. (13)

Retail Trade (46)
- Retailers, n.e.c. (46)

Health and Social Services (38)
- Physicians' Off. (2)
- Off. of Para-medical Personnel (Practitioners) (36)

4. LABOUR MARKET TRENDS

Forecasts indicate that employment will grow at a rate well above the average. The labour supply that is currently ready to enter the labour market should meet the expected demand. The requirement for seeing orthoses has risen dramatically over the last decade. The growing segment of the population has brought about an increased need for eye care and is thus having a positive effect on the demand for the services of dispensing opticians. The requirement for dispensing opticians should be boosted by more frequent screening tests for children and the increasing number of people likely to own more than one pair of corrective lenses.

Certain factors may, however, influence the increase in the demand, such as private insurance plans and the number of optometrists and ophthalmologists who provide eye glasses and contact lenses. Nonetheless, employment opportunities for specialist opticians have risen due to the growing requirement of consumers for quality services to replace untrained assistants who often workin the sale of eye glasses and contact lenses.

4. LABOUR MARKET TRENDS (cont'd)

Knowledge of management and communications in the retail trade, such as financial management, marketing and advertising, in addition to technologies specific to the field makes it easier for dispensing opticians to enter the labour market.

The current trend suggests that in the immediate future technological progress will have no significant impact either on the skills or the tools needed to practise the occupation.

Opticians are constantly in demand in the outlying regions of large urban centres. Geographic mobility is an asset.

5. EDUCATION AND SKILLS

A community college diploma in seeing orthoses technologies is required. Membership in the Order of Dispensing Opticians is mandatory for those who wish to practise as and use the title of dispensing optician.

6. SALARY

According to the 1986 census, the average salary of dispensing opticians working full time was $21,476.

RADIOLOGICAL TECHNOLOGISTS AND TECHNICIANS 3155

Examples: X-ray Technician, Nuclear Medicine Technologist, Diagnostic Radiological Technician, Radiotherapy Technician, Diagnostic Medical Sonographer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,695	3,030	335	675	1,010

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
165	-	845	-	1,010

OTHER IMPORTANT REQUIREMENTS

New technologies affect the tasks of radiological technicians.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	78.5	80.8	Under 25 years	21.3	-	Full-time	82.9	77.8
Males	21.5	19.2	Over 54 years	3.3	-	Part-time	17.1	22.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Services (97)
- Hospitals (86)
- Physicians' Off. (8)
- Diagnostic and Therapeutic Care, n.e.c. (3)

4. LABOUR MARKET TRENDS

Below-average employment growth is forecast. The demand for this occupational group is partially linked to technological changes. The effect of these changes on the tasks of these professionals appears to be ambiguous. For instance, the tendency of hospitals to share costly services and to use equipment and personnel that are mobile, could limit the growth of the labour demand. However, new technologies may have a positive effect on this demand by requiring greater specialization. Often, new equipment is added to the existing equipment without replacing it, thus allowing a greater variety of tests and maintaining the level of employment for these technicians.

Radiology comprises three technological fields, i.e. general or diagnostic radiology (X-rays, ultrasound), nuclear medicine and radiotherapy (oncology) and specialized radiology (echography, electroencephalography). The impact of the new technologies varies from field to field. In general radiology, the appearance of automated developing equipment for plates has made the tasks of these technicians easier. The rate of plate-making has increased and has had the effect of concentrating the technician's tasks to preparing the machine and positioning the patient. The appearance of the scanner in specialized radiography and of computer gamma-emission transaxial tomography in

4. LABOUR MARKET TRENDS (cont'd)

the field of nuclear medicine, have given rise to new methods of organ analysis and make it possible to simultaneously view an image of the organ and conduct a sectional exploration of it. In specialized radiology, the traditional plate has been replaced by computerized digital imaging. This trend should continue to grow and, in the more or less long term, the computer could surpass conventional radiology. Radiology technicians will tend to become increasingly specialized in medical imaging techniques.

New technologies are often linked to computers. A knowledge of computers and processing of computer data is an asset for this occupational group.

Radiology technicians come into direct contact with patients. New technologies are changing the task division, i.e. the diagnostic aspect is becoming less predominant in the tasks of the radiology technician since they have been taken over by medical personnel. This has given rise to a strengthening of the radiology technician/patient relationship. The diversification and increase in the number of professional duties of radiology technicians are responsible for means that their role is shifting more and more toward informing patients about the techniques being used.

The demand for specialized radiology technicians should remain steady, while that for general radiology technicians could decline. The latter could undergo retraining in a specialty, thus filling some of the available specialty jobs and increasing the competition for graduates in this field. A large portion of the full-time radiology jobs in hospitals have become part-time. Nearly one-quarter of technicians are employed on a part-time basis.

5. EDUCATION AND SKILLS

A community college diploma in nuclear medicine technology, in radiodiagnosis or radiotherapy technology is required, depending on the specialty. Membership in the Order of Radiology Technicians of Quebec is mandatory.

6. SALARY

According to the 1986 census, the average salary of these professionals was $25,395. In 1988, those working full time in this occupational group earned an average of $12.25 an hour, two years after obtaining their diploma.

MEDICAL LABORATORY TECHNOLOGISTS AND TECHNICIANS 3156

Examples: Biochemistry Technologist, Microbiology Technologist, Electron Microscopy Technologist, Medical Laboratory Technician, Veterinary Laboratory Technician, Laboratory Assistant, Animal Health Technician

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
9,810	11,930	2,120	2,535	4,655

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
395	70	1,950	365	2,780

OTHER IMPORTANT REQUIREMENTS

New technologies are changing the tasks of laboratory technicians.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	75.1	76.2	Under 25 years	21.6	-	Full-time	89.6	83.3
Males	24.3	23.8	Over 54 years	3.3	-	Part-time	10.4	16.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Serv. (76)
- Hospitals (68)
- Physicians' Off. (1)
- Diagnostic and Therapeutic Services, n.e.c. (7)

Chemical and Chemical Prod. Ind. (4)
- Man. of Pharmaceuticals and Medicines (4)

Education (6)
- Universities and Colleges (6)

Retail Trade (5)
- Drug Stores (5)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. These occupations remain sensitive to government spending policies in the area of health. Increased requirements will depend to a large extent on government policy and the financial resources available to the medical and hospital system. Technological advancement has had an important impact on these occupations, particularly in the field of biochemistry. New technologies are increasing requirements for analyses and changing the role of medical laboratory technicians. With automated or semi-automated multi-parameter devices that can conduct a series of different routine analyses for one or more patients for the same test, analysis tasks are completely taken over by the machine. Consequently, the tasks of preparing test tubes and reagents, setting up and monitoring machines are tending to increase for lab technicians, while diagnostic tasks are decreasing. Moreover, the printing of report results by a printer attached to the machine requires no assistance, thus reducing the time spent on the writing and administration of analyses.

4. LABOUR MARKET TRENDS (cont'd)

The time freed up by electronic analysis equipment is used for more advanced analysis work. The rapid development of new technologies has stimulated the growth of specialized work requiring a considerable diagnostic capacity. The work of specialists (biochemists, technologists) is becoming increasingly concentrated in laboratories. The trend toward employing those with a university education in the field may grow, thereby causing the number of job prospects for laboratory technicians to decline. The use of new machines means that candidates with training in electronics and a familiarity with computers and equipment maintenance have an advantage.

The growing trend toward home care and the development of instruments that make it possible to conduct simple tests in the physician's office or even in the patient's home (e.g. diabetic units) may change the nature of technicians' work. Their expertise in calibration, quality control, and in providing technical consulting services to users will be increasingly sought after. Technicians' routine tasks may be enriched by consulting tasks.

5. EDUCATION AND SKILLS

A community college diploma in medical laboratory technology is required or, depending on the specialty, in chemical and biological technology or in cytology. For animal health or veterinary laboratory technicians a community college diploma in animal health or in natural environment technologies is required.

6. SALARY

According to the 1986 census, the average salary of laboratory technicians working full time was $24,847. In 1988, two years after completing their Diploma of Collegial Studies, the average salary of those working full time in this occupation was $20,584.

DENTUROLOGISTS (DENTAL HYGIENISTS/ASSISTANTS, DENTAL LABORATORY TECHNICIANS)

3157-3158-3161

Examples: Oral Hygienist, Orthodontic Technician, Dental Ceramist, Dental Assistant, Dental Hygienist, Dental Laboratory Technician

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
6,615	9,525	2,910	2,320	5,230

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
590	605	3,650	295	5,140

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	75.8	75.9	Under 25 years	41.3	-	Full-time	90.7	85.2
Males	24.2	24.1	Over 54 years	4.9	-	Part-time	9.3	14.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Misc. Manufacturing Industries (86)
- Scientific and Professional Equipment (86)

Health and Social Services (13)
- Dentists' Off. (13)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast for this occupational group. The labour market outlook for dental laboratory technicians and denturologists is bright. Changing social values are causing people to take increasingly better care of their teeth. Dentists will see their work shift away from tooth extractions toward dental repair and maintenance. Requirements for bridges, crowns and fixed or moveable orthodontic prostheses should increase and thereby spur the demand for dental lab technicians. The growing trend toward providing personalized services in this field makes communication skills an asset for these professionals. Factors such as the aging population, changes in dental diseases and the reduced incidence of tooth decay resulting in better dental maintenance, together with growing public concern about oral health, should boost demand for the services of dental hygienists. Since the need for preventive dental medicine is likely to grow under the impact of a higher quality of life and education, so too will the demand for dentists. Employment opportunities for dental assistants should reflect the increase in the number of dentists.

5. EDUCATION AND SKILLS

A community college diploma in denturology, dental hygiene or dental technology is required. Membership in the Order of Denturologists, the Order of Dental Hygienists or the Order of Dental Technicians is required, depending on the occupation. Students who are able to gain some experience, even part-time, during the third year of their studies have an advantage. For dental assistants, a minimum of eleven years of schooling together with typing and bookkeeping skills are required. For technicians specializing in orthodontics and prosthodontics, two career paths are available: a community college diploma in manufacturing technology, plus a two- or three-year program in prostho-orthodontics, or a five-year apprenticeship or on-the-job training program.

6. SALARY

According to the 1986 census, the average salary of denturologists was $25,715, of dental hygienists and dental assistants, $16,024 and of dental laboratory technicians, $19,610. In 1988, the average salary of denturologists working full time was $18,443 two years after completing their studies, and dental hygienists and dental assistants earned $19,416.

OTHER MEDICAL PERSONNEL 3169

Examples: Dietary Technician, Ocularist, Respiratory Technician, Prosthetist-Orthotist, Electroencephalographic Technician, Electrocardiographic Technician, Dietary Assistant, Emergency-entry Attendant

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
6,230	8,925	2,695	2,060	4,755

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
440	880	1,290	320	2,950

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%) :

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	-	50.5	Under 25 years	-	-	Full-time	-	71.3
Males	-	41.5	Over 54 years	-	-	Part-time	-	20.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Census data are not available for these occupations; however, it is reasonable to believe that these occupations are concentrated in the health and social services sectors.

4. LABOUR MARKET TRENDS

Employment for this occupational group is expected to grow at an above-average rate. More than half of these technicians will enter newly created jobs, while the others will replace people leaving jobs that have existed for some time. Growing public awareness of the importance of a healthy diet should spur the requirement for dietary technicians, but the labour supply is expected to exceed demand. Dietary technicians may be required to work in a broader range of fields since they will be increasingly in demand to work as consultants and educators in schools, day-care centres, outdoor recreation centres and community health establishments. The technological changes being introduced in hospitals could reduce the requirement for these technicians as well as have an impact on their tasks. The computerization of menus making it possible to produce daily statistics on the number of menus and meals will increasingly allow dietary technicians to work directly with patients. Knowledge of computer systems and their use is an asset. Good communication and group work skills are sough after. The employment outlook is expected to be bright for respiratory and anesthetic technicians. Respiratory services are very diversified. Demand in health institutions, particularly those situated in outlying areas, and the increase in home-care services should spur the requirement for these technicians.

5. EDUCATION AND SKILLS

A community college diploma in dietetic technology is required to practise as a dietary technician. A health certificate is required for hearing-aid technicians. A Diploma of Collegial Studies in hearing-aid technology is mandatory. Membership in the Order of Hearing Aid Acousticians of Quebec is required. Prosthetist-orthotists need a Diploma of Collegial Studies in order to practise. For respiratory technicians, a Diploma of Collegial Studies in respiratory and anesthetic technologies is required, and membership in the Corporation of Respiratory Therapists is mandatory. A Diploma of Collegial Studies in medical electrophysiology leads to the occupations of electroencephalographic technician and electrocardiographic technician.

6. SALARY

According to the 1986 census, the average salary of other medical personnel working full time was $19,502. According to the National Graduate Survey, the average salary of those working full time in the occupational group of "other medical personnel" was $19,416, two years after obtaining a Diploma of Collegial Studies.

PRODUCT AND INTERIOR DESIGNERS 3313

Examples: Exhibition and Display Designer, Fashion Designer, Stained-Glass Artist, Securities Designer, Fabric Designer, Furniture Designer, Office Space Planner, Fashion Designer - Clothing Industry, Industrial Designer, Interior Decorator, Floral Arranger, Florist

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
8,075	9,175	1,100	2,140	3,240

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
475	230	730	0	1,435

OTHER IMPORTANT REQUIREMENTS

Knowledge of computer-assisted design is an asset.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	46.3	49.3	Under 25 years	22.7	-	Full-time	89.7	88.5
Males	53.7	50.7	Over 54 years	11.2	-	Part-time	10.3	11.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Retail Trade (26)
- Food Stores (3)
- General Merchandise Stores (4)
- Women's Clothing Stores (2)
- Clothing and Dry Goods Stores, n.e.c. (1)
- Hardware Stores (1)
- Furniture Stores (5)
- Drug Stores (1)
- Florists' Shops (9)

Wholesale Trade (2)
- Apparel Wholesalers (2)

Clothing Industries (12)
- Men's Clothing Ind. (2)
- Women's Clothing Ind. (7)
- Children's Clothing Ind. (1)
- Misc. Clothing Ind. (2)

Construction (3)
- Specialized Contractors (3)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a below-average rate, given the outlook for the clothing, furniture and shoe sectors. Nonetheless, the public's growing emphasis on product quality and manufacturers' desire to bring production more in line with demand should spur the requirement for specific products and boost employment opportunities for product designers. For interior decorators/designers and furniture designers, the shifting of

4. LABOUR MARKET TRENDS (cont'd)

consumer taste towards top-of-the-line and original products may towards international markets, the concern for marketing original products and the development of specialized niches may boost the requirement for fashion, shoe and fur designers.

New technologies are having an impact on the duties of industrial product designers and sooner or later all sectors of the manufacturing industry will be affected by computer-assisted design (CAD) and computer-assisted drafting (CAD). These computer technologies tend to reduce repetitive and routine tasks, leaving more time for analysis and concept work. Computer-assisted design and drafting makes the work of product designers easier by accelerating the execution, correction and production of new versions of an original plan. Knowledge of existing software in their field and the ability to use this software are assets for young designers. Candidates who combine a knowledge of computing with drafting ability are sought after.

5. EDUCATION AND SKILLS

To enter into these occupations candidates must complete a community college diploma in the chosen discipline. For interior decorators/designers, a community college diploma in interior design or a bachelor's degree in design is required. Membership in the Société des décorateurs-ensembliers du Québec is mandatory in order to use the title. A bachelor's degree in industrial design is an asset for industrial designers. A portfolio and knowledge of innovations in the field are also important elements.

6. SALARY

According to the 1986 census, the average salary of product designers and interior decorators was $22,412. The results of the 1988 National Graduate Survey showed that the average annual salary of community college graduates who were working full time two years after graduation was $14,795.

ADVERTISING AND ILLUSTRATING ARTISTS 3314

Examples: Commercial Artist, Advertising Layout Person, Lettering Artist, Videotex Page Designer, Graphic Artist

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
6,670	9,055	2,385	1,250	3,635

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
690	-	100	1,055	1,845

OTHER IMPORTANT REQUIREMENTS

Knowledge of computer-assisted design is an asset.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	30.8	38.2	Under 25 years	24.6	-	Full-time	-	92.2
Males	69.2	61.8	Over 54 years	4.6	-	Part-time	-	7.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (86 %)

Business Services (36)
- Advertising Services (30)
- Scient. Studies and Serv. (2)
- Management Consulting Services (1)
- Misc. Services (3)

Gov't Service (6)
- Other Federal Services (1)
- Gov't Service (4)
- Local Gov't Service (1)

Printing and Publishing (20)
- Commercial Printing (9)
- Platemaking, Typesetting and Trade Bindery Ind. (3)
- Publishing Only (4)
- Publishing and Printing (4)

Misc. Manufacturing Ind. (7)
- Signs and Displays Industry (7)

4. LABOUR MARKET TRENDS

Forecasts indicate an above-average employment growth rate. It is expected that the upward trend noted over the past few years in the number of magazines will continue, particularly in the case of specialized magazines and business publications, which should reach the anglophone market. A dynamic publishing sector should spur job prospects for advertising and illustrating artists. The advent of desktop publishing in the publishing market makes it possible to produce periodicals, bulletins and posters at home by combining text and graphics on the same screen with layout capability. The spread of this new technology could encourage the establishment of independent graphics companies, particularly in the area of internal corporate publications.

4. LABOUR MARKET TRENDS (cont'd)

The introduction of computer-assisted design and drafting technology has made the task of advertising and illustrating artists easier. Using a basic design, corrections and revisions of designs can be made with increasing speed. The designer can make corrections in the presence of a client and provide the client with new versions of the original design. Knowledge of computerized systems is an asset for these specialists. For illustrating and graphic artists, computers are useful for preparing sketches, creating graphics and animating images. Good design and drawing skills are a definite asset. Artists with exceptional talents and skills are most likely to be employed. Portfolios are very important.

5. EDUCATION AND SKILLS

Training can be acquired in a number of ways: a community college diploma, either in graphic arts or commercial design; a bachelor's degree in graphic design; or a university degree in art, with emphasis on its applications to specific fields such as medicine or electronics. Portfolios are important.

6. SALARY

According to the 1986 census, the average salary of advertising and illustrating artists working full time was $25,890.

PHOTOGRAPHERS AND CAMERA OPERATORS 3315

Examples: Photographer, Scientific Photographer, Commercial Photographer, Aerial Photographer, Television Camera Operator, Reporter/Photographer

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
3,120	3,715	595	505	1,100

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
405	190	15	355	965

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	12.2	16.6	Under 25 years	17.1	-	Full-time	-	91.6
Males	87.8	83.4	Over 54 years	7.1	-	Part-time	-	8.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Other Services (54)
- Photographic Serv., n.e.c. (54)

Communication (13)
- Radio and Television Broadcasting (13)

Amusement and Recreation Serv. (5)
- Motion Picture Prod. and Distr. (5)

Printing and Publishing (3)
- Publishing and Printing (3)

Education (3)
- Universities and Colleges (3)

Business Services (1)
- Advertising Services (1)

4. LABOUR MARKET TRENDS

Below-average employment growth is forecast. In our view, the projected labour supply from the regular education system underestimates real supply, which should be more substantial. Generally speaking, the market outlook for this occupational group is rather dim, despite a few bright spots. The increasing use of visual aids in business to promote products and of photographs in medical research will provide some employment opportunities for photographers. However, the fall in prices for quality cameras may translate into a decline in demand for the professional photographer. The widening use of video cameras at social functions such as weddings and group gatherings is opening up a market for camera operators.

4. LABOUR MARKET TRENDS (cont'd)

For television camera operators, the use of video cameras which capture image and sound simultaneously could serve to reduce the labour force as shooting crews that use this new equipment tend to cut back on their employees. In television studios, the use of both electronic cameras and picture-tube cameras requires operators to keep abreast of a number of technologies.

5. EDUCATION AND SKILLS

For students wishing to pursue a career in one of these occupations, a number of educational avenues are open, ranging from a community college diploma in photography to a course in a private photography school or an apprenticeship. For movie camera operators, a community college diploma in film with courses in photography is necessary. For reporters/camera operators and television camera operators, a community college diploma in communications is a definite asset. Previous experience acquired as an amateur photographer, the ability to work with other people and a certain artistic talent are assets.

6. SALARY

According to the 1986 census, the average salary of these professionals was $25,758.

PRODUCERS AND DIRECTORS, PERFORMING AND AUDIO-VISUAL ARTS 3330

Examples: Filmmaker, Dramatic Director, Program Director, Broadcasting Producer, Stage Director

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
4,280	5,280	1,000	845	1,845

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
380	0	50	590	1,020

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	30.7	34.8	Under 25 years	7.2	-	Full-time	96.6	95.2
Males	69.3	65.2	Over 54 years	8.1	-	Part-time	3.4	4.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Communications (43)
- Radio and Television Broadcasting (43)

Amusement and Recreation Serv. (41)
- Movie Theatres (2)
- Film Production and Distribution (29)
- Theatrical Services (10)

4. LABOUR MARKET TRENDS

Employment in these occupations is expected to grow at a rate slightly above the average. These occupations are generally not practised by beginners since they require many years of experience, but by people who have the necessary experience. Jobs for radio and television directors are subject to budget cuts, making the employment outlook for this occupation dim. Technological changes have had an impact on the tasks of directors. Such innovations as computer-aided editing, mix-keying of digital reference codes and duplicating with a computer or VCR, mean that editing tasks are being divided between directors and technicians. Directors are playing an increasingly important role in the pre-editing of programs and commercials, which is still being done manually. New computerized editing equipment is used by technicians or editors in the final editing stage as well as the post-production stage. All the preparatory tasks for the final editing are carried out by directors. The expansion of films, commercials and videos may help open job opportunities for directors and producers. The growing reliance on external production may open up jobs for self-employed directors.

4. LABOUR MARKET TRENDS (cont'd)

Overall, the number of visitors and spectators at artistic events is increasing. Employment for directors is often dependent on the funds made available to them by private and public organizations, particularly in the areas of theatre and dance. The shrinking funds placed at the disposal of cultural organizers and increased competition for these funds among the various workers in the arts could slow down the employment growth for these professionals.

5. EDUCATION AND SKILLS

There is no particular training for these occupations, but a community college diploma or bachelor's degree in a relevant discipline may be useful. The main career paths leading to these occupations at the college level are a diploma in theatre production or in media arts and technology, and in filmmaking or drama at the university level. Most of the 1986 graduates who entered the labour market in these occupations had studied commerce and management in university. In this field, experience as artistic director in theatre, film, television and music as well as leadership qualities and organizational and managerial skills are as important as academic training. A sound knowledge of accounting, promotion, management and staging are valuable assets. This type of work requires the ability to work with professionals in other fields such as choreographers, sound technicians, distributors, etc.

6. SALARY

According to the 1986 census, the average salary of these professionals who were working full time was $34,508.

MUSICIANS AND SINGERS, PERFORMERS SPECIALIZED IN MUSIC AND MUSICAL ENTERTAINMENT 3332-3333

Examples: Accompanist, Instrumentalist, Pianist, Pop Singer, Soprano

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
3,675	5,080	1,405	945	2,350

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
190	0	55	515	760

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	-	57.3	Under 25 years	-	-	Full-time	-	61.7
Males	-	42.7	Over 54 years	-	-	Part-time	-	38.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (%)

Amusement and Recreation (67)
- Film Prod. and Distr. (1)
- Theatrical Services (66)

Accommodation and Food Serv. (16)
- Hotels and Motels (5)
- Restaurants, Caterers (11)

Community Services (6)
- Cultural Org. (6)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate, given the employment outlook in the entertainment, recreation, accommodation and food services sectors. The number of part-time jobs is very high. In general, the music industry is very competitive and requires a great deal of talent and skill. The increased use of recorded music in amusement establishments has slowed down the employment growth for musicians and singers. New technologies such as synthesizers have had a moderate impact on the employment outlook for this occupational group.

5. EDUCATION AND SKILLS

University studies in music are recommended for those contemplating a career as music instructor, composer, orchestra musician or conductor. Private singing courses are also a recognized means of training.

6. SALARY

According to the 1986 census, the average salary of musicians working full time was $20,674. The salary of performers specialized in music and musical entertainment was $16,991.

ACTORS 3335

Examples: Actor, Comedian, Mime

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,080	1,350	270	270	540

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
95	0	0	0	95

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	46.0	40.8	Under 25 years	-	-	Full-time	-	59.0
Males	54.0	59.2	Over 54 years	-	-	Part-time	-	41.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Amusement and Recreation (70)
- Movie Theatres (2)
- Film Prod. and Distr. (11)
- Theatrical Services (56)
- Misc. Services (1)

Communications (15)
- Radio and Television Broadcasting (15)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate, given the labour market outlook in the recreation sectors. Labour market fluctuations have little impact on this occupational group. Seasonal variations are negligible and technological changes have no significant effect on these occupations. Part-time work is common for actors owing to the limited number of jobs and the keen competition. A large number of actors work in other occupations in order to earn a living at the same time as they are looking for acting jobs.

5. EDUCATION AND SKILLS

No mandatory training is required for this occupation. Most actors have received professional training at university, CEGEP, the National Theatre School or through an apprenticeship with a professional theatre company.

6. SALARY

According to the 1986 census, the salary of actors working full time was $24,298. The rate of remuneration varies considerably in this occupational group, depending on the type of work, whether or not the actor is on-camera, whether the actor has a leading role or is part of a group of performers. In 1986-87, the minimum amount paid by Radio-Canada to leading television actors was $389, while off-camera actors earned $282. In 1985, a film actor (10 or more lines of dialogue) earned a minimum of $311 a day, while an actor with fewer than 10 lines of dialogue earned a minimum of $209 a day. The minimum weekly pay received by local stage actors ranged from $284 to $454; touring stage actors earned between $669 and $839 a week.

RADIO AND TELEVISION ANNOUNCERS 3337

Examples: Newscaster, Radio Broadcaster, Record Librarian, Disc Jockey

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,815	1,940	125	280	405

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
475	0	140	0	615

OTHER IMPORTANT REQUIREMENTS

Entry in to the labour market may remain difficult.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	20.0	27.2	Under 25 years	27.3	-	Full-time	86.7	82.0
Males	80.0	72.8	Over 54 years	4.3	-	Part-time	13.3	18.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Communications (97)
- Radio and Television Broadcasting (97)

Amusement and Recreation (2)
- Theatrical Services (2)

4. LABOUR MARKET TRENDS

Forecasts indicate that employment will grow at a below-average rate, and a labour surplus is expected over the next few years. In the radio and television sector, computerized management facilitates routing which consists of establishing a broadcasting schedule for programs, commercials and call letters during the course of the day. Music selection on the radio can be done through computers, according to pre-established criteria. Computerized management has and will continue to have a growing impact on the tasks of record librarians and broadcasters-operators. Computerization could reduce the tasks of these professionals to functional work, such as coding musical pieces and inputting data on video display units. Many jobs are on a contract basis.

5. EDUCATION AND SKILLS

A community college diploma in media arts and technology or a bachelor's degree in communications is required, depending on the specialization.

6. SALARY

According to the 1986 census, the average salary of radio and television announcers working full time was $30,081.

WRITERS AND EDITORS 3351

Examples: Advertising Ideas Person, Journalist, News Reporter, Critic, Technical Writer, News Editor, Picture Editor, Advertising (all industries)

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
9,680	13,170	3,490	3,110	6,600

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
615	0	100	665	1,380

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	38.8	48.3	Under 25 years	8.7	-	Full-time	93.3	91.5
Males	61.2	51.7	Over 54 years	12.1	-	Part-time	6.7	8.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Printing and Publishing (27)
- Publishing Only (12)
- Radio and Television Broad. (15)

Gov't Service (6)
- Other Federal Service (3)
- Provincial Service (3)

Misc. Services (21)
- Labour Org. & Trade Ass. (1)
- Misc. Services, n.e.c. (20

Business Services (6)
- Advertising Serv. (6)

Communications (18)
- Radio and Television Broadcasting (18)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. The increasing popularity of magazines, particularly specialized magazines, should spur employment opportunities for journalists and magazine article writers. Ready access to computerized databases making it possible to locate information rapidly, build a file and verify information makes journalists' work easier. Knowledge of databases and how to use them is an asset for these professionals. Knowledge of wordprocessing is becoming essential. The concentration of weekly publications should continue, thus increasing the number of weeklies distributed free of charge, to the detriment of sold weeklies. Consequently, the proportion of advertising in relation to information should increase. Moreover, the growing trend toward the exchange of articles among journalists rather than sending journalists on location could have an adverse effect on the growth of job opportunities for these professionals.

4. LABOUR MARKET TRENDS (cont'd)

In the television sector, the introduction of video cameras and computer-assisted editing has had an impact on the tasks of journalists and reporters, who now play a greater role in preliminary editing tasks, while the final editing is performed by technicians.

Qualifications related to journalism, such as media contact and the ability to work in a team are sought after in the public relations sector, and this could create job openings for journalists.

The complexity and quantity of scientific equipment requiring user's manuals should help to maintain the demand for technical writers. Certain technological changes in the publishing industry could give rise to employment opportunities for a new kind of writer. Desktop publishing using microcomputers, desktop publishing software and laser printers makes it possible to produce periodicals, newsletters, flyers and advertising posters at home. Business services in this area could increase. Basic knowledge of typesetting, composition and layout design is an asset. Advanced technologies such as word processors and computer software allow writers and editors to carry out their tasks more quickly and efficiently.

5. EDUCATION AND SKILLS

The qualifications required vary from one occupation to the next: for technical writers, a community college diploma in pure or applied science or a university degree in a related field is needed; for editors, editorial writers and journalists, a community college diploma in media arts and technology or a university degree in journalism or communications is necessary. Most of the graduates who were working full time in 1988 in the occupational group of writers and editors had completed either a bachelor's degree in performing and fine arts or in health sciences or a Diploma of Collegial Studies in mass communications.

6. SALARY

According to the 1986 census, the average salary of writers and editors working full time was $31,888. In 1988, two years after completing their studies, graduates working full time earned an average of $19,588.

TRANSLATORS AND INTERPRETERS 3355

Examples: Translator, Interpreter, Linguist

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1. LABOUR MARKET TRENDS FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
3,695	5,145	1,450	1,325	2,775

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
205	0	-	-	205

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	78.5	63.1	Under 25 years	-	-	Full-time	-	88.8
Males	21.5	36.9	Over 54 years	-	-	Part-time	-	11.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Misc. Services (30)
- Misc. Services, n.e.c. (30)

Gov't Service (27)
- Other Federal Services (21)
- Provincial Service (5)
- Local Gov't Serv. (1)

Finance, Ins. and Real Estate (4)
- Banks (2)
- Insurance Carriers (2)

Printing and Publishing (2)
- Publishing Only (2)

Health and Social Serv. (2)
- Hospitals (2)

Education (2)
- Universities and Colleges (2)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. Job opportunities for translators are stimulated by the federal government's bilingualism policy. The need to translate the increasing number of scientific and technical manuals will spur the demand for those trained in this area. In addition to general knowledge, in-depth technical knowledge is an advantage. The capacity for ongoing professional development is becoming essential. In addition to translation, the tasks of translators are expanding to include adaptation, writing, co-writing and revision. Writing and communication skills are becoming increasingly important for translators. Access to computerized databases and the growing use of computers to translate texts, particularly technical texts, will facilitate the work of these professionals. As computer-assisted translation becomes more refined, the average volume of translation will increase, thus boosting job opportunities for translators since most machine- translated texts must be reworked and rewritten. Knowledge of word processing is a basic skill.

5. EDUCATION AND SKILLS

A university degree in translation or in modern languages and literature as well as the knowledge of English, French and sometimes a third language are required. No interpreter training program exists in Quebec, but a bachelor's degree in interpretation is offered in Ontario.

6. SALARY

According to the 1986 census, the average salary of those working full time in these occupations was $31,543.

COACHES, TRAINERS AND INSTRUCTORS, SPORTS AND RECREATION 3370

Examples: Physical Training Teacher, Athletic Coach, Recreational Supervisor, Sports and Recreation Manager

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
7,110	9,495	2,385	1,040	3,425

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
480	300	345	645	1,770

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	44.8	46.1	Under 25 years	51.9	-	Full-time	72.9	73.0
Males	55.2	53.9	Over 54 years	2.4	-	Part-time	27.1	27.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Amusement & Recreation Serv. (35)
- Golf Clubs (2)
- Misc. Services (33)

Accommodation and Food Serv. (4)
- Camping Grounds (4)

Education (21)
- Elem. and Sec. School (12)
- Post-secondary Inst. (5)
- Universities and Colleges (4)

Gov't Service (21)
- Other Federal Service (1)
- Local Gov't Service (20)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast, based on the outlook in the recreational and related services sector. The forecast is based on the increase in the population's income, which should translate into more time spent in recreational activities. Also, growing public awareness of the importance of good health may boost demand for those working in sports. Competition on the job market is stiff between university graduates in recreation or physical education and community college graduates in special education.

5. EDUCATION AND SKILLS

The qualifications required for these occupations range from a community college diploma to a university degree in the relevant field.

6. SALARY

According to the 1986 census, the average salary of coaches, trainers and instructors in sports and recreation working full time was $25,347.

SECRETARIES AND STENOGRAPHERS 4111

Examples: Legal Secretary, Executive Secretary, Stenotypist, Medical Secretary, Stenotype Operator, Secretarial Clerk, Secretary

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
140,080	157,885	17,805	42,660	60,465

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
12,580	12,670	11,820	1,630	38,700

OTHER IMPORTANT REQUIREMENTS

Skills in a range of fields are in demand, and especially in operation of automated office equipment.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	98.5	98.6	Under 25 years	32.1	-	Full-time	91.2	87.2
Males	1.5	1.4	Over 54 years	5.4	-	Part-time	8.8	12.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Serv. (12)
- Hospitals (6)
- Related Health Care Inst. (2)
- Physicians' Off. (4)

Business Services (8)
- Accountants' Off. (1)
- Eng. and Scientific Serv. (1)
- Lawyers' and Notaries' Off. (5)
- Misc. Serv. (1)

Gov't Service (12)
- Other Federal Service (3)
- Provincial Service (6)
- Local Gov't Service (3)

Education (8)
- Elem. and Sec. Schools (6)
- Universities and Colleges (2)

Fin., Ins. and Real Estate (9)
- Banks (3)
- Insurance Carriers (3)
- Ins. & Real Estate Agencies (3)

4. LABOUR MARKET TRENDS

Below-average employment growth is expected, but the large size of this occupational group practically guarantees a large number of job openings. The introduction of new technologies has had an impact on the duties of secretaries and has brought about a revaluation of their role. The increasingly widespread use of word processing reduces the time devoted to typing and increases office and management tasks. In a number of cases, secretarial tasks are shifting toward assistant administrative work, in addition to word processing tasks. Besides word processing, many specific applications of office automation, such as electronic spreadsheets and databases, can be integrated and this requires greater skills on the part of secretaries. Candidates who have taken courses in data processing increase their chances for employment and promotions. Because of their knowledge of new work tools, secretaries may be called on to play a role in introducing management personnel to office automation and

4. LABOUR MARKET TRENDS (cont'd)

providing them with further training. Secretarial jobs often involve a variety of duties, such as reception, computer operation and bookkeeping. Employers are increasingly looking for secretaries with skills in a range of fields, and especially in the operation of automated office equipment. There is a shortage of bilingual secretaries.

6. EDUCATION AND SKILLS

Completion of either the secondary vocational course in business techniques or the community college secretarial science program is required. Graduates who have completed studies in a related field and who have the necessary skills may also enter this occupational group. Familiarity with word processing and other automated office equipment is increasingly in demand, and bilingualism is often necessary.

6. SALARY

According to the 1986 census, the average salary of secretaries and stenographers working full time was $17,711.

TYPISTS AND CLERK-TYPISTS 4113

Examples: Telex Operator, Typist, Word Processing Operator, Clerk-Typist, Teletypist

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENING			JOB OPENING DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
5,660	5,125	-535	1,440	905

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL JOB OPENINGS 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
950	325	0	0	1,275

OTHER IMPORTANT REQUIREMENTS

Knowledge of word processing is a major asset.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	98.4	96.1	Under 25 years	42.3	-	Full-time	91.9	87.7
Males	1.6	3.9	Over 54 years	4.9	-	Part-time	8.1	12.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Service (25)
- Defence Service (1)
- Other Federal Service (7)
- Provincial Service (11)
- Local Gov't Service (6)

Health and Social Services (7)
- Hospitals (6)
- Related Health Care Inst. (1)

Fin., Ins. and Real Estate (15)
- Banks (6)
- Insurance Carriers (6)
- Ins. & Real Estate Agencies (3)

Communication (5)
- Radiobroadcasting & Telecommun. (1)
- Telephone Systems (4)

Business Services (8)
- Employment Agencies (2)
- Accountants' Off. (1)
- Lawyers' & Notaries' Off. (1)
- Misc. Services (4)

4. LABOUR MARKET TRENDS

Employment in this occupational group is expected to decrease. New job openings will be created mainly through attrition of the present labour force. Part-time work is expected to be plentiful. Technological changes have had the effect of eliminating a number of document preparation tasks for typists. With the advent of word processors, typing duties are increasingly confined to tasks related to word processing, particularly when the work is organized in the form of pools. The introduction of word processors has also created several new occupations, such as formatting specialists, correction entry clerks, word processing supervisors and training specialists. Specialized tasks are often carried out by a word processing specialist. Prospects are best for those who upgrade their skills and who have a knowledge and experience in operating automated office equipment, especially word processors and microcomputers. The ability to type in both French and English is a major asset.

5. EDUCATION AND SKILLS

Completion of the secondary vocational course in business techniques, stenographer-typist or office assistant option, or the regular secondary course with emphasis on typing is generally necessary. Normal requirements are a typing speed of 40 to 60 words per minute and good spelling. Ability to operate a word processor is increasingly required. Bilingualism is an asset. Depending on the type of business, knowledge of the dictaphone, telex, bookkeeping, billing, order taking and filing may be required.

6. SALARY

According to the 1986 census, the average salary of typists and clerk-typists working full time was $17,403.

BOOKKEEPERS AND ACCOUNTING CLERKS 4131

Examples: Ledger Clerk, Cost Clerk, Accounting Clerk, Accounts Receivable Clerk, Assessment Clerk NEC, Bookkeeping Clerk, Payroll Clerk

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
84,500	89,610	5,110	24,745	29,855

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
5,860	1,445	2,910	2,170	12,385

OTHER IMPORTANT REQUIREMENTS

Knowledge of computer systems is a major asset.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	75.5	78.6	Under 25 years	-	-	Full-time	-	84.1
Males	24.5	21.4	Over 54 years	-	-	Part-time	-	15.9

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Retail Service (9)
- Food Stores (2)
- General Merchandise Stores (2)
- Motor Vehicle Dealers (1)
- Motor Vehicle Repair Shops (2)
- Household Furn. Stores (1)
- Retailers, n.e.c. (1)

Construction Ind. (6)
- Building Constr. (2)
- Special-trade Contr. (4)

Fin., Ins. & Real Estate (8)
- Banks (4)
- Insurance Carriers (2)
- Ins. & Real Estate Agencies (2)

Wholesale Trade (5)
- Food (1)
- Machinery, n.e.c. (2)
- Lumber & Building Mat. (1)
- Wholesalers, n.e.c. (1)

Gov't Service (8)
- Other Federal Service (4)
- Provincial Service (2)
- Local Gov't Service (2)

Business Services (5)
- Accountants' Off. (4)
- Misc. Services (1)

4. LABOUR MARKET TRENDS

Below-average employment growth is forecast, mainly because of the computerization of accounting systems. Most of the jobs that will be available from now until the year 2000 will be created through attrition of the present labour force. The ongoing improvement of microcomputers and their applications will determine the job opportunities for bookkeepers and accounting clerks. Technological advances are improving electronic processing, with the result that small business computers and cash registers can now perform a variety of bookkeeping and inventory functions. This will tend to reduce job opportunities for bookkeepers. Prospects are best for those

4. LABOUR MARKET TRENDS (cont'd)

with knowledge of information systems and data entry. Knowledge of computer software (both integrated and customized accounting packages) designed for such applications as accounts payable and receivable, financial records, billing, etc. is essential for these professionals. The duties of bookkeepers and accounting clerks are shifting away from manual work toward work on computer terminals. Accounting clerks' jobs are tending to shift toward "computer technician" jobs. Knowledge of database and statistics processing software and software packages such as Lotus 1-2-3 or Data Base II and III is a definite asset. Use of electronic data processing has led to the creation of various specialized areas within this occupational group, such as accounts payable and receivable clerks, payroll clerks, inventory clerks, etc.

5. EDUCATION AND SKILLS

Completion of the secondary vocational course in business techniques, accounting clerk option, is required for payroll, accounting and bookkeeping clerks. In the case of bookkeeping, however, employers encourage continuing study at the university level on a part-time basis. For posting clerks, secondary school completion in the office clerk option is necessary. Assistant accountants require a community college diploma in business administration. Specific skills on certain computerized accounting systems are sometimes required. Knowledge of data processing is a major asset.

6. SALARY

According to the 1986 census, the average salary of bookkeepers and accounting clerks working full time was $18,945.

CASHIERS AND TELLERS 4133

Examples: Electronic Cash Register Cashier, Bank Teller, Cashier Box Office, Ticket Agent, Grocery Checker, Self-Serve Gas Station Cashier

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
78,840	108,920	30,080	21,135	51,215

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL JOB OPENINGS 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
8,350	4,030	2,700	1,095	16,175

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	90.6	89.1	Under 25 years	52.3	-	Full-time	67.4	57.7
Males	9.4	10.9	Over 54 years	3.4	-	Part-time	32.6	42.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Retail Trade (51)
- Food Stores (31)
- General Merch. Stores (8)
- Hardware Stores (2)
- Drug Stores (4)
- Wine and Beer Stores (1)
- Tobacconists (1)
- Retailers, n.e.c. (2)

Finance, Insurance and Real Estate (25)
- Banks (25)

Accommodation and Food Services (11)
- Restaurants (11)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast, based on the growing importance that is being placed on more varied and personalized services. Cashiers' employment opportunities, often of a part-time nature, exist in all sorts of retail businesses. Such technological changes as on-line computers, automated teller machines and electronic cash registers have changed the duties of cashiers. In the retail sector, particularly supermarkets, a laser beam scanner linked to the central computer makes it possible to carry out several tasks at once: the prices of items are determined automatically, the bill is prepared and the store's inventory is revised. Experience in operating an electronic cash register is increasingly required. In the banking sector, technological advances are limiting the growth of bank tellers' employment opportunities. Bank tellers' duties are changing dramatically: electronic fund transfer (EFT) means that the physical transfer of paper bank notes, cheques and money orders is replaced

4. LABOUR MARKET TRENDS (cont'd)

with messages sent by electronic impulses; automated teller machines (ATMs) allow customers to make cash withdrawals and deposits, deposit cheques, and transfer funds between accounts. Counter terminals are now equipped to enable tellers to update deposit information and other data, a task that used to be performed by data entry clerks at the computer centre.

Cashiers with new qualifications in terms of new technologies face better job opportunities. The wider variety of financial products offered and the increased concern on the part of banks and financial institutions to provide more personalized services could expand the cashier's role to include sales and the ability to offer clients a range of products suitable for their needs. Skills in human relations and in sales may become assets.

5. EDUCATION AND SKILLS

Secondary school graduation and on-the-job training for a period of one to six months are generally required. Bilingualism is an asset.

6. SALARY

According to the 1986 census, the average salary of cashiers working full time was $13,937.

INSURANCE, BANK AND OTHER FINANCE CLERKS 4135

Examples: Securities Clerk, Bank Clerk, Brokerage Clerk, Foreign Exchange Clerk

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
14,520	20,935	6,415	4,685	11,100

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
445	85	170	0	700

OTHER IMPORTANT REQUIREMENTS

The computerization of many transactions has brought about a re-orientation of clerks' duties.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	80.9	85.1	Under 25 years	37.2	-	Full-time	96.3	91.3
Males	19.1	14.9	Over 54 years	41.8	-	Part-time	3.7	8.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Finance, Insurance and Real Estate (95)
- Banks (82)
- Other Credit Institutions (2)
- Insurance Carriers (8)
- Insurance and Real Estate Agencies (3)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate, based on the outlook in the insurance sector. The growing use of computer technology will eliminate even more of the tasks performed by this occupational group, but will create others. Office automation has reduced the number of repetitive tasks performed by finance clerks and has increased their efficiency. In insurance, clerks' duties have been reorganized as a result of technological changes. Many archival tasks have been computerized. Contract standardization has eliminated many of the duties formerly assigned to policy writers. Now it is the computer that decides whether or not to accept the proposed risk and determines and prints out the terms and rates. Policy writing clerks have to enter and code computer data. Writing and archiving are done simultaneously. The use of software packages has made the tasks of raters (those who calculated insurance rates) redundant. However, with access to computer files and rates, insurance clerks can spend more time meeting with customers and doing file analysis. In banking, network reorganization and the computerization of many transactions have brought about a reorientation of clerks' duties toward the analysis of customer files and the provision of a widening range of services. The deregulation of the financial and insurance sectors means that clerks may have to acquire different skills and provide different

4. LABOUR MARKET TRENDS (cont')

services. Skills in human relations and sales are in demand, along with a knowledge of computers and data processing. The number of part-time positions in these occupations should climb rapidly.

5. EDUCATION AND SKILLS

For insurance clerks, a community college diploma in business administration, insurance option, is an advantage. Bank clerks should have a community college diploma in business administration, finance option. For credit clerks and real estate clerks, secondary school graduation is essential. In general, familiarity with computer systems and human relations and sales skills are assets.

6. SALARY

According to the 1986 census, the average salary of insurance, bank and finance clerks working full time was $18,969.

STATISTICAL CLERKS 4137

Examples: Statistics Clerk, Compiler, Actuarial Clerk

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,100	930	-170	295	125

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
35	70	0	0	105

OTHER IMPORTANT REQUIREMENTS

The use of microcomputers and data processing software is widespread.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	65.0	70.9	Under 25 years	27.6	-	Full-time	96.8	86.6
Males	35.0	29.1	Over 54 years	9.2	-	Part-time	3.2	13.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Service (49)
- Other Federal Service (40)
- Provincial Service (5)
- Local Gov't Service (4)

Business Services (5)
- Accountants' Off. (1)
- Management Cons. Off. (1)
- Misc. Services (3)

Transp., Comm. & Other Util. (10)
- Air Transport (2)
- Serv. Inc. to Air Transp. (1)
- Other Truck Transp. (1)
- Urban Transit Systems (2)
- Radio & Television Broadcasting (1)
- Telephone Systems (2)
- Electric Power (1)

Fin., Ins. and Real Estate (3)
- Banks (1)
- Insurance Carriers (2)

Health and Social Services (6)
- Hospitals (4)
- Related Health Care Inst. (2)

4. LABOUR MARKET TRENDS

Job opportunities are expected to diminish from now until the year 2000. Job openings will be created mainly through attrition of the present labour force. This situation is brought about by the relative stability of the labour force in the public administration sector and by the introduction of new data processing technologies. The growing use of microcomputers by the users themselves who can accomplish their tasks and carry out certain statistical operations normally assigned to statistics clerks, could reduce the demand for these clerks. The increasingly widespread use of software that can process data should bring about a reduction in employment for statistics clerks and a change in the required qualifications. Employment opportunities are best for candidates

4. LABOUR MARKET TRENDS (cont'd)

who know how to key in and process data on the computer. New technologies are reducing the manual tasks carried out by statistics clerks and increasing terminal-related tasks. For calculations and transactions, database and statistics processing software such as Lotus 1-2-3 or Data Base II, III are frequently used. Familiarity with the main software packages is a major asset.

5. EDUCATION AND SKILLS

Completion of the secondary vocational course, accounting clerk option, is required. Knowledge of how to operate data processing equipment and microcomputers is a definite asset.

6. SALARY

According to the 1986 census, the average salary of statistical clerks working full time was $23,098.

SUPERVISORS OF OFFICE MACHINE OPERATORS 4140

Examples: Electronic Data Processing Equipment Operator, Blueprinting-Machine Operator, Photocopy Machine Operator

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,065	1,105	40	200	240

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
20	0	0	0	20

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	49.3	50.2	Under 25 years	-	-	Full-time	-	97.0
Males	50.7	49.8	Over 54 years	-	-	Part-time	-	3.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Fin., Ins. and Real Estate (15)
- Banks (10)
- Investment Companies (1)
- Insurance Carriers (4)

Business Services (11)
- Computer Services (7)
- Accountants' Off. (2)
- Eng. and Scient. Serv. (1)
- Misc. Services (1)

Communication (5)
- Radio Broadcasting (1)
- Telephone Systems (4)

Education (4)
- Elem. and Sec. Schools (1)
- Universities and Colleges (3)

Transportation (4)
- Railway Transport (4)

Electrical Prod. Ind. (3)
- Communications Equip. Man. (3)

4. LABOUR MARKET TRENDS

Below-average employment growth is forecast. Most job openings will be created through attrition of the present labour force. Despite the advent of new technologies, supervision and co-ordination duties should remain the responsibility of supervisors of office machine operators. Nonetheless, the traditional role of these supervisors is expanding to include training personnel to use new equipment and supervision of computer systems used by personnel reporting to them. Computer systems that continually monitor the amount of work being done by operators in charge of keying in data facilitate the tasks of supervisors.

5. EDUCATION AND SKILLS

Companies tend to recruit supervisors from among the most skilled operators who usually have a high- school diploma.

6. SALARY

According to the 1986 census, the average salary of supervisors of business machine operators working full time was $29,946.

ELECTRONIC DATA PROCESSING EQUIPMENT OPERATORS 4143

Examples: Electronic Data Processing Equipment Operator, Computer Operator, Digital Calculator Operator, Computer Peripheral Equipment Operator

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
25,120	38,340	13,220	6,795	20,015

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
1,535	95	15	605	2,250

OTHER IMPORTANT REQUIREMENTS

Technological changes have had an impact on the number of these operators and their tasks.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	76.4	78.1	Under 25 years	39.9	-	Full-time	95.1	92.1
Males	23.6	21.9	Over 54 years	2.6	-	Part-time	4.9	7.9

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Service (14)
- Other Federal Service (7)
- Provincial Service (5)
- Local Gov't Service (2)

Business Services (13)
- Employment Agencies (1)
- Computer Services (6)
- Accountants' Offices (1)
- Scientific Studies and Services (2)
- Lawyers' & Notaries' Off. (1)
- Misc. Services (2)

Finance, Insurance and Real Estate (13)
- Banks (7)
- Insurance Carriers (4)
- Insurance and Real Estate Agencies (2)

Transportation, Communication and Other Utilities (7)
- Air transport (1)
- Railway transport (2)
- Telephone Systems (3)
- Electric Power (1)

Education (5)
- Elem. and Sec. Schools (2)
- Universities and Colleges (3)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast, given the outlook in the finance and business services sectors and the positive impact of technological changes on the field. Most of the employment opportunities will be more the result of the increase in the number of new jobs than jobs vacated through attrition. Technological changes have had an impact on the tasks of these operators. The job of keypunch operator is tending to disappear as the use of perforated cards is becoming increasingly rare. In the case of electronic data processing equipment operators, terminals connected to mainframes are being replaced by microcomputers and digital disks, and laser printers are being added to existing peripherals. Operators whose tasks are essentially related to data capture and input

4. LABOUR MARKET TRENDS (cont'd)

could see their job prospects diminish since more and more users are operating their own microcomputers. The duties of operators may increasingly include support to users and equipment maintenance. In the long term, equipment maintenance and repair could take up an ever greater portion of machine operators' tasks at the expense of their role as equipment operators. Candidates with aptitudes in these areas will face a brighter employment outlook. In the short term, however, the number of job openings for workers who input data directly and operators of other equipment should continue to grow. Operators in charge of terminals or peripherals should face a steady demand.

Many positions are evening or night jobs, and workers are sometimes required to do overtime.

5. EDUCATION AND SKILLS

Generally, completion of a secondary vocational course in business techniques, data processing option, is required. However, those who enter this occupational group with postsecondary studies enjoy a competitive advantage on the labour market.

6. SALARY

According to the 1986 census, the average salary of electronic data processing equipment operators working full time was $19,508.

PRODUCTION CLERKS 4151

Examples: Material Checker, Production Control Clerk, Stock Chaser, Production Clerk, Production Co-ordinator

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,240	1,575	-665	340	-325

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
170	0	0	0	170

OTHER IMPORTANT REQUIREMENTS

Technological changes have an impact on this occupational group.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	31.3	35.2	Under 25 years	26.1	-	Full-time	97.0	95.9
Males	68.7	64.8	Over 54 years	10.3	-	Part-time	3.0	4.1

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Wholesale Trade (17)
- Food (1)
- Apparel (1)
- Electrical Machinery (2)
- Wholesalers, n.e.c. (1)
- Lumber and Building Mat. (1)
- Food Stores (2)
- General Merchandise Stores (6)
- Hardware Stores (1)
- Wine and Beer Stores (1)
- Retailers, n.e.c. (1)

Chemical & Chem Prod. Industries (3)
- Pharmaceutical Prod. (1)
- Toilet Preparations (1)
- Misc. Chemical Ind. (1)

Transp., Comm., & Other Util. (5)
- Other Truck Transport (2)
- Other Storage & Warehousing (1)
- Telephone Systems (1)
- Electric Power (1)

Clothing Industries (4)
- Men's Clothing Ind. (1)
- Women's Clothing Ind. (2)
- Children's Clothing Ind. (1)

Paper Industries (3)
- Pulp and Paper Mills (2)
- Paper Box and Bag Man. (1)

Rubber and Plastics Prod. Ind. (4)
- Rubber Prod. (2)
- Plastic Prod. (2)

Transportation Equip. Ind. (3)
- Aircraft & Aircraft Parts (2)
- Motor Vehicles (1)

4. LABOUR MARKET TRENDS

Forecasts indicate that this occupational group will see a reduction in its volume of employment. Job openings will be created through attrition and are not expected to compensate for the anticipated loss of employment. The labour market outlook for this occupational group is linked to the forecast growth in the manufacturing and commercial sectors. Employment for this group is also affected by technological changes. New computerized systems for stock management, statistical control, automated payment authorizations and other innovations, are tending to reduce the need for production clerks.

4. LABOUR MARKET TRENDS (cont'd)

Production planning is tending to become more complex with the introduction of new machinery. Some industries are particularly affected by this development. Increasing importance is therefore being given to planning support, and this could maintain employment opportunities for production clerks, especially for those involved in production co-ordination and monitoring. These clerks will have to have a knowledge of production equipment and computer systems.

5. EDUCATION AND SKILLS

The minimum requirement for entry to these occupations is a high-school diploma with, preferably, courses in mathematics, typing, office machinery and accounting. For production co-ordination jobs, a community college diploma in industrial management is required. Knowledge of computer system used in the field is an important asset.

6. SALARY

According to the 1986 census, the average salary of production clerks working full time was $23,045.

SHIPPING AND RECEIVING CLERKS 4153

Examples: Delivery Clerks, Freight Clerk, Dispatcher Clerk, Receiving Clerk, Freight Agent

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
23,305	23,145	-160	3,925	3,765

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
1,940	600	105	0	2,645

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	15.7	16.9	Under 25 years	39.7	-	Full-time	95.3	94.4
Males	84.3	83.1	Over 54 years	9.5	-	Part-time	4.7	5.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Wholesale Trade (19)
- Food (4)
- Drugs (1)
- Apparel (3)
- Motor Vehicles (3)
- Electrical Machinery (2)
- Wholesalers, n.e.c. (2)
- Hardware (1)
- Lumber and Building Materials (1)

Transportation (3)
- Railway Transport (1)
- Other Truck Transport (2)

Retail Trade (14)
- Food Stores (5)
- General Merch. Stores (5)
- Hardware Stores (1)
- Furniture Stores (1)
- Drug Stores (1)
- Retailers, n.e.c. (1)

Clothing Industries (7)
- Men's Clothing Ind. (2)
- Women's Clothing Ind. (3)
- Misc. Clothing Ind. (2)

4. LABOUR MARKET TRENDS

Employment for this occupational group is expected to decrease slightly. Job openings will be created mainly through attrition of the present labour force. Since most shipping clerks work in the manufacturing and commercial sectors, employment in this occupational group is sensitive to economic conditions. This group does not seem particularly sensitive to technological changes in the medium term. While many of the tasks performed by these workers will continue to be done manually, computerization will affect store and warehouse inventory control and records management. In the long term, such technological improvements as computer links at the point of sale allowing direct stock control, risk limiting employment growth in this occupational group. Shipping and receiving clerks must be familiar with the different modes of transportation and related regulations.

5. EDUCATION AND SKILLS

No specific qualifications are required for these occupations, though candidates with a high-school diploma are generally preferred. Most workers in this occupational group start out as warehouse workers. Most employers provide a four- to six-week on-the-job training period.

6. SALARY

According to the 1986 census, the average salary of shipping and receiving clerks working full time was $19,338.

STORE CLERKS AND RELATED OCCUPATIONS 4155

Examples: Purchasing Clerk, Stock Clerk, Tool Clerk, Warehouse Clerk, Storekeeper, Stock Handler, Inventory Clerk, Wine Cellar Clerk

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOBS OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
24,735	27,710	2,975	5,140	8,115

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
1,495	1,000	20	645	3,160

OTHER IMPORTANT REQUIREMENTS

This occupational group is affected by new technologies.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	20.2	20.5	Under 25 years	-	-	Full-time	-	93.2
Males	79.8	79.5	Over 54 years	-	-	Part-time	-	6.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Retail Trade (17)
- Food Stores (3)
- General Merch. Stores (7)
- Tire Stores (1)
- Motor Vehicle Dealers (3)
- Drug Stores (2)
- Retailers, n.e.c. (1)

Education (7)
- Elem. and Sec. Schools (4)
- Post-secondary Inst. (2)
- Universities and Colleges (1)

Wholesale Trade (12)
- Food (2)
- Apparel (1)
- Motor Vehicles (2)
- Electrical Machinery (1)
- Wholesalers, n.e.c. (2)
- Hardware (1)
- Lumber and Building Mat. (1)
- Wholesalers, n.e.c. (2)

Gov't Service (8)
- Defence Services (2)
- Other Federal Service (2)
- Provincial Service (2)
- Local Gov't Service (2)

4. LABOUR MARKET TRENDS

Below-average employment growth is forecast. The labour market outlook for this occupational group is affected by the automation of inventory control systems. The use of computer technology to maintain perpetual inventories, determine optimum stock levels automatically, and facilitate records management is tending to depress demand for stock clerks. In the sales sector, computerized cash registers automatically control inventories and prepare the order forms necessary to replenish supplies when stock levels are too low. Equivalent systems are used in manufacturing companies. The widespread use of these systems could cause employment opportunities for this occupational group to decline.

5. EDUCATION AND SKILLS

No special qualifications are needed for these occupations, but employers generally prefer secondary school graduates. On-the-job training is often required.

6. SALARY

According to the 1986 census, the average salary of stock clerks and those in related occupations working full time was $21,378.

RECEPTIONISTS AND INFORMATION CLERKS 4171

Examples: Admitting Clerk, Hospital Information Clerk, Tourist Information Clerk, Receptionist, Information Clerk, Hospital Admitting Clerk

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
31,335	41,250	9,915	10,785	20,700

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
3,680	1,200	245	765	5,890

OTHER IMPORTANT REQUIREMENTS

Knowledge of office automation is an asset.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	89.5	89.3	Under 25 years	35.4	-	Full-time	82.2	79.6
Males	10.5	10.7	Over 54 years	8.5	-	Part-time	17.8	20.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Serv. (22)
- Hospitals (12)
- Related Health Care Inst. (3)
- Physicians' Off. (3)
- Off. of Para-medical Pers. (2)

Gov't Service (12)
- Other Federal Serv. (4)
- Provincial Serv. (6)
- Local Gov't Serv. (2)

Finance, Ins. and Real Estate (7)
- Banks (2)
- Insurance Carriers (2)
- Ins. & Real Estate Agencies (2)
- Real Estate Operators (1)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. Technological advances should not affect the demand for receptionists. In most cases, innovation means providing work stations with terminals and microcomputers equipped with electronic mail. Moreover, the widespread use of office automated equipment, such as word processing machines, electronic diaries and computerized databases will facilitate receptionists' tasks. Candidates with a knowledge of these systems have an advantage. In general, knowledge of typing and word processing is an asset. This occupational group may be adversely affected by the advent of integrated voice messaging systems (IVMS), automatic information tellers and videotex systems (where a keyboard and a television receiver are used to obtain a display of information organized in magazine form). However, these systems are not very widespread at the present time. More and more hotel reception desks are being equipped with microcomputer systems for registering arrivals and reservations and calculating transactions; this will likely affect receptionists' employment opportunities as well as their duties. In hospitals, admitting clerks must be familiar with microcomputers since the use of computerized systems for admitting patients is widespread.

5. EDUCATION AND SKILLS

Completion of the secondary vocational course in business techniques, receptionist-telephone operator option, is required. Bilingualism is required. Experience in communications is an asset.

6. SALARY

According to the 1986 census, the average salary of receptionists and admitting clerks working full time was $16,774.

CLAIM ADJUSTERS 4192

Examples: Complaint Clerk, Claim Adjuster

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,090	1,175	85	250	335

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
90	0	0	115	205

OTHER IMPORTANT REQUIREMENTS

Deregulation of the financial sector and computerization have affected this occupational group.

2. MAIN CHARACTERISTICS (1986 %)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	54.8	62.1	Under 25 years	26.7	-	Full-time	95.2	96.7
Males	45.2	37.9	Over 54 years	9.5	-	Part-time	4.8	3.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Fin., Ins. and Real Estate (29)
- Banks (2)
- Other Credit Agencies (2)
- Insurance Carriers (25)

Transportation (8)
- Air Transport (2)
- Railway Transport (3)
- Other Truck Transport (3)

Retail Trade (14)
- General Merchandise Stores (5)
- Motor Vehicle Dealers (9)

Gov't Service (9)
- Other Federal Serv. (4)
- Provincial Serv. (4)
- Local Gov't Serv. (1)

4. LABOUR MARKET TRENDS

Employment for this occupational group should remain relatively stable. Most of the job openings will be created through attrition of the present labour force. With the deregulation of the financial sector, financial services may be offered by insurance companies, and insurance products by other financial institutions. This increased competition between firms has forced many small insurance firms to merge with larger ones. It is the number of small general insurance firms that have declined the fastest. The trend toward company mergers is expected to continue over the next few years. The result of this could be a dimmer employment outlook for complaint clerks and claim adjusters. Computerization of many insurance transactions is under way in almost all insurance companies. Computer systems can be used to accomplish a number of tasks, such as filing claims. Information provided by these systems, i.e. the clauses of the original contract for each insured person, whether the policy is for replacement cost or covers specific goods only, the extent of the coverage and its limitations, facilitate

4. LABOUR MARKET TRENDS (cont'd)

the tasks of adjusters. Those with a knowledge of these basic systems have a competitive edge. Moreover, the ability to show tact when dealing with customers, particularly in difficult situations, is sought after. Investigations often require adjusters to work evenings and weekends in order to meet people outside office hours.

5. EDUCATION AND SKILLS

A community college diploma in business administration, insurance option, is usually necessary. Some employers require their claim adjusters to complete a three-to-five year course outside of working hours that is funded by the Insurance Institute of Canada. Independent insurance adjusters in Quebec must have a license issued by the Inspector General of Financial Institutions.

6. SALARY

According to the 1986 census, the average salary of claim adjusters working full time was $20,503.

OTHER TRAVEL CLERKS, TICKET, STATION AND FREIGHT AGENTS

4193

Examples: Shipping Agent, Ticket Agent, Baggage Clerk, Reservation Clerk, Travel Clerk, Travel Consultant, Rail-Express Clerk, Freight Forwarding Clerk (Imports and Exports)

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
5,945	7,645	1,705	1,720	3,425

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
445	0	590	635	1,670

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	58.6	65.7	Under 25 years	-	-	Full-time	-	87.4
Males	41.4	34.3	Over 54 years	-	-	Part-time	-	12.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation (93)
- Air Transport (28)
- Services Incidental to Air Transport (2)
- Railway Transport (8)
- Urban Transit Systems (3)
- Misc. Services Incidental to Transport (52)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate. The employment outlook in this occupational group is generally very sensitive to economic conditions. In the short term, job prospects may decline due to difficulties in the air transport sector. In the long term, the employment outlook should brighten due to the increase in average disposable incomes and the growing popularity of travel. The automation of travel services has made it possible to provide numerous related services. For instance, car rental companies are increasingly using computer systems for reservations and inventory control. Computer technology also allows passengers to pay for both hotel accommodations and car rental at the airport. Computerized reservation systems are becoming more widespread in travel agencies. Travel and ticket agents frequently perform tasks requiring the use of computer equipment, such as making reservations and issuing tickets. The growing use of these new technologies could have an adverse effect on the demand for ticket agents, particularly within airlines that employ automatic machines with a computer-controlled videodisc scanner to provide information on flights and even issue tickets without an agent's assistance.

4. LABOUR MARKET TRENDS (cont'd)

Workers in this occupational group are often in direct or indirect contact with customers. Good communication skills are an asset and bilingualism is essential. Previous experience is also an important consideration. Computer technology may transform the travel distribution system: a direct link may be possible between the supplier and customers, who will be able to plan their trips with the help of technical information provided by the supplier. The role of travel agents could shift toward that of travel consultants working in the capacity of human relations specialists who are able to identify their customers' travel needs. Knowledge of a second language is an important asset and a knowledge of several languages may be an advantage for promotion and distribution outside Quebec. Knowledge of human relations, marketing, geography and land resources is in demand.

5. EDUCATION AND SKILLS

Entry to the occupation of tourist information clerk and travel agent requires a community college diploma in tourism. For ticket agents, employers offer a general on-the-job training program. A good knowledge of geography, mastery of a second language, good interpersonal skills and an aptitude for sales are assets.

6. SALARY

According to the 1986 census, the average salary of travel agents, ticket clerks and station agents working full time was $21,941.

SUPERVISORS: SALES OCCUPATIONS, COMMODITIES 5130

Examples: Vegetable Buyer, Antique Dealer, Jeweller, Grocer, Exporter, Lumber Yard Supervisor, Oil Distributor, Importer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
22,320	19,455	-2,865	5,765	2,900

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
2,600	605	505	0	3,710

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	25.7	27.8	Under 25 years	9.4	-	Full-time	95.3	94.9
Males	74.3	72.2	Over 54 years	15.3	-	Part-time	4.7	5.1

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Retail Trade (65)
- Food Stores (23)
- General Merchandise Stores (4)
- Tire Stores (1)
- Gasoline Service Stations (2)
- Motor Vehicle Dealers (3)
- Shoe Stores (1)
- Men's Clothing Stores (2)
- Women's clothing Stores (3)
- Clothing and Dry Goods Stores, n.e.c. (4)
- Hardware Stores (3)
- Household Furniture Stores (5)
- Drug Stores (1)
- Florists' Shops (4)
- Jewellery Stores (2)

4. LABOUR MARKET TRENDS

Employment for this occupational group is expected to diminish over the next few years. Job openings will be created for the most part by the need to replace employees who leave the field. The increase in the number of small exclusive boutiques allows sales managers and proprietors to supervise sales personnel directly, thus eliminating the supervisory positions usually required in large department stores. With the computerization of cash registers and monitoring systems, the control of sales personnel is integrated into the functions of sales

4. LABOUR MARKET TRENDS (cont'd)

managers, thus reducing and even eliminating the need for supervisors. For exporters, knowledge of business law, of regulations and practices that apply to both Canadian and foreign producers, and of the laws and regulations governing exports and imports are important assets. Knowledge of the buyers' language is a definite competitive asset. For grocers, market trends and keen competition seem to confer an advantage to those who specialize. In fact, consumers' habits, attitudes and needs are changing. Product standardization is becoming less and less desirable, in favour of products that are adapted to the particular needs of the clientele. A higher standard of living and new consumer needs are creating a demand for food specialists (fruit stores, bakeries, etc.). Specialized grocery stores are competing more and more with large supermarkets. The appearance of huge warehouse stores and the increasing number of modern convenience stores offering more and more services (fast food, baked goods, etc.) are increasing the competition. Grocers who can offer clearly identifiable products will face a better employment outlook.

5. EDUCATION AND SKILLS

Generally speaking, a high-school diploma is an asset for retail store managers. Candidates must undergo on-the-job training. Requirements vary with the products or services offered. New candidates are finding it increasingly useful to have a community college diploma or a university degree in business administration, marketing or merchandising technology. However, it is possible for sales personnel to enter supervisory positions without any advanced schooling. Knowledge of the merchandise sold is a major asset. Bilingualism is often required.

6. SALARY

According to the 1986 census, the average salary of consumer goods sales supervisors working full time was $23,877.

TECHNICAL SALESMEN AND RELATED ADVISERS 5131

Examples: Market Support Computer Consultant, Heavy Equipment Technical Salesperson, Residential Energy Adviser, Industrial Machinery Salesperson, Data Processing Sales Representative

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
4,010	5,780	1,770	925	2,695

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
245	160	295	660	1,360

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	9.6	10.4	Under 25 years	15.1	-	Full-time	97.1	97.8
Males	90.4	89.6	Over 54 years	9.2	-	Part-time	2.9	2.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Wholesale Trade (36)
- Drugs (1)
- Elec. Machinery (14)
- Farm Machinery (2)
- Machinery, n.e.c (11)
- Hardware (2)
- Lumber and Building Mat. (1)
- Wholesalers, n.e.c. (5)

Construction Industry (7)
- Building Construction (1)
- Special-trade Contractors (6)

Business Services (8)
- Computer Services (6)
- Mgmt. Consultants' Off. (1)
- Misc. Services (1)

Transp., Comm., and Other Utilities (6)
- Telephone Systems (2)
- Electric Power (3)
- Gas Distribution (1)

Machinery Industries (7)
- Misc. Machinery Man. (3)
- Office Machinery Man. (4)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. About 1,800 new jobs will be created, to which may be added 1,000 jobs vacated through attrition of the present labour force. Demand for these professionals varies from one industry to the next. The growing interdependence between development, marketing and the sale of products and services means that technical sales and related advisory personnel are increasingly in demand. Technological changes have had little impact on the tasks of these professionals, though the use of portable computers to record orders, sales and correspondence is increasingly widespread. Employment opportunities are better in fields related to electronics. The computer consulting market should give rise to interesting opportunities for market support computer consultants.

4. LABOUR MARKET TRENDS (cont'd)

Most employment activity is concentrated in small and medium-sized businesses, and subcontracting for large consulting firms. The specialized areas of planning, computer system installation, personnel training and customized programming are most in demand. The introduction of such new technologies as robotics and the fields of education and training also offer good job opportunities. Technica' sales and related advisory personnel should have an in-depth knowledge of the products they are selling and the markets they are serving. An understanding of the product's technical characteristics and knowledge of the clientele's requirements are essential.

5. EDUCATION AND SKILLS

Entry to these occupations usually requires a community college diploma in a field related to the products or the services being sold. A first university degree in computer science, mechanical engineering or electrical engineering is desirable for those who wish to work as technical salespersons in the electronic data processing sector. Experience in related fields, ideally through the same distribution channels, is preferred by employers.

6. SALARY

According to the 1986 census, the average salary of technical sales and related advisory personnel working full time was $31,213.

COMMERCIAL TRAVELLERS 5133

Examples: Pharmaceutical Representative, Office Furniture Salesperson, Commission Salesperson, Commercial Sales Representative

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
22,760	19,480	-3,280	4,545	1,265

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
1,705	190	265	2,325	4,485

OTHER IMPORTANT REQUIREMENTS

Experience in sales and knowledge of the product are assets.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	9.4	15.4	Under 25 years	9.1	-	Full-time	97.6	96.8
Males	90.6	84.6	Over 54 years	13.1	-	Part-time	2.4	3.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Wholesale Trade (41)
- Petroleum Products (1)
- Paper and Paper Prod. (2)
- Food (6)
- Drugs (3)
- Apparel (3)
- Household Furniture (1)
- Motor Vehicles (2)
- Electrical Machinery (4)
- Machinery, n.e.c. (7)
- Hardware (2)
- Lumber and Building Mat. (2)
- Wholesalers, n.e.c. (8)

Food and Beverage Industries (5)
- Misc. Food Ind. (3)
- Beverage Ind. (2)

4. LABOUR MARKET TRENDS

Forecasts indicate that employment in this occupational group will decrease. Job openings will be created mainly through attrition of the present labour force. The work of commercial travellers is assuming new value within companies since these professionals have become the link between the producer and the client, relaying information about the market to the former and about the product's technical characteristics to the latter. These salespersons are becoming increasingly specialized. An aptitude for sales and good communication skills are in demand. Bilingualism is an asset. These salespersons must often travel as well as work evenings and weekends.

5. EDUCATION AND SKILLS

Entry to this occupational group usually requires a high-school diploma. A community college diploma or a university degree in a field related to the products sold is an important asset, as well as courses in commerce and economics. In some cases, these credentials may even be mandatory. Employers may also require recruits to undergo an on-the-job training period of up to six months. However, interpersonal skills are even more important than training. Experience in sales and knowledge of the product sold are assets.

6. SALARY

According to the 1986 census, the average salary [illegible]mercial travellers working full time was $30,979.

SALESMEN AND SALESPERSONS, COMMODITIES, N.E.C. 5135

Examples: Counter Clerk, Meat Counter Clerk, Grocery Store Clerk, Automotive Parts Clerk, Hardware Salesperson, Building Supplies Salesperson

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
155,575	186,720	31,145	10,300	41,445

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
12,800	10,200	3,450	2,245	28,695

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	50.8	50.5	Under 25 years	37.0	-	Full-time	80.3	76.6
Males	49.2	49.5	Over 54 years	10.8	-	Part-time	19.7	23.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Retail Trade (73)
- Food Stores (15)
- General Merchandise Stores (14)
- Tire Stores (1)
- Motor Vehicle Dealers (4)
- Shoe Stores (3)
- Men's Clothing Stores (2)
- Women's clothing Stores (6)
- Stores, n.e.c. (7)
- Hardware Stores (3)
- Household Furniture Stores (5)
- Drug Stores (2)
- Book and Stationery Stores (1)
- Jewellery Stores (2)
- Retailers, n.e.c. (8)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a rate slightly above the average. Personalized products and services are increasingly sought after by consumers. The number of small specialized boutiques should continue to grow, to the detriment of large department stores. Quality service in the retail trade is a competitive asset. Good interpersonal skills for meeting customer needs are in demand. A large number of traditional sales tasks are now

4. LABOUR MARKET TRENDS (cont'd)

carried out by electronic cash registers that serve a number of uses. Nonetheless, the number of sales clerks does not seem to be affected by this new technology. Such non-traditional tasks as the verification and rebuilding of stocks can now be carried out by sales clerks. Sales clerks are often required to work evenings and Saturdays.

5. EDUCATION AND SKILLS

No specific qualifications are needed. Training is often provided on the job. Supervisory positions, however, are easier to obtain with a high-school diploma. Experience in sales is an important asset. Bilingualism is often required.

6. SALARY

According to the 1986 census, the average salary of sales clerks and salespersons of commodity goods working full time was $19,118.

SUPERVISORS: SALES OCCUPATIONS, SERVICES 5170

Examples: Customs House Broker, Insurance Broker, Mortgage Broker, Grain Broker, Investment Broker, Stock Broker

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
4,220	4,465	245	1,275	1,520

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
115	0	0	515	630

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	21.6	23.4	Under 25 years	6.0	-	Full-time	97.3	96.8
Males	78.4	76.6	Over 54 years	15.9	-	Part-time	2.7	3.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Finance, Insurance and Real Estate (85)
- Banks (2)
- Other Credit Agencies (1)
- Security Brokers and Dealers (9)
- Investment Companies (2)
- Insurance Carriers (30)
- Insurance and Real Estate Agencies (39)
- Real Estate Operators (2)

4. LABOUR MARKET TRENDS

Forecasts indicate that the employment growth rate for this occupational group will remain relatively stable. Job openings will result mainly from the need to replace incumbents. Since these are management positions, candidates usually enter these occupations after several years of experience in a related field. Nearly 85% of service sales supervisors work in the financial, insurance and real estate sectors. Marketing skills are essential, along with specialized knowledge of the relevant financial sector. Real estate brokers are affected by the deregulation of this sector, which means that Canadian financial institutions can now hold 100% of the capital stock of brokerage firms and foreign companies. The securities industry is changing and we are seeing a trend toward the concentration of companies. Globalization of the market, clients who frequently invest outside the country, foreign competition and the free trade agreement, are all factors that exert a strong influence on brokerage firms. Employment opportunities are more numerous in large firms and in very specialized firms. The widespread use of computer software in the field of life insurance is changing the duties of supervisors of life

4. LABOUR MARKET TRENDS (cont'd)

sales and commissions as well as allowing the necessary corrections to be made in order to complete transactions. insurance sales. Electronic links between brokers and insurance firms are increasing, making it easier to monitor Knowledge of these software packages is an important asset for supervisors. However, computer technology has had an adverse effect on the demand for supervisors and sales supervisors by reducing job opportunities for these professionals. With the deregulation of the financial sector which allows banks to sell insurance products and insurance firms, financial products, the competition is much greater. The process of merging firms has begun. The concentration of firms should continue mainly in the area of general insurance and particularly for small insurance companies. This situation is causing job opportunities for supervisors to decline since rationalization often affects companies at the general management level.

5. EDUCATION AND SKILLS

The qualifications required vary with the occupation. In general, candidates should have a community college diploma or a university degree in business administration, marketing or economics. Some positions require a license from a licensing body in the activity sector concerned or type of service sold. For example, securities brokers must have completed a course in the securities trade in Canada offered by the Canadian Securities Institute. However, there are still a number of sales sectors where an employee can gradually work up to a supervisory position.

6. SALARY

According to the 1986 census, the average salary of sales supervisors working full time was $41,802.

INSURANCE SALESMEN AND AGENTS 5171

Examples: Insurance Appraiser, Claim Appraiser, Life Insurance Salesperson

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
17,820	19,510	1,690	4,850	6,540

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
180	75	265	560	1,080

OTHER IMPORTANT REQUIREMENTS

Deregulation of the financial sector is having an effect on insurance companies.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	25.4	30.0	Under 25 years	14.5	-	Full-time	97.5	96.8
Males	74.6	70.0	Over 54 years	12.8	-	Part-time	2.5	3.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Finance, Insurance and Real Estate (99)
- Insurance Carriers (61)
- Insurance and Real Estate Agencies (38)

4. LABOUR MARKET TRENDS

Below-average employment growth is expected. In all, 6,540 jobs will open up, most of which will result from the need to replace current employees. The insurance sector is changing dramatically: lower birth rates, the aging of the population, double incomes and the deregulation of the financial sector are only some of the factors affecting the field of insurance. Consumers' attitudes toward life insurance are changing. Fifteen years ago, they spent 3% of their incomes on insurance, while now they spend only 1.7%. This downward trend can be explained by the increased participation of women in the job market, the low number of children per family, and the establishment of public federal and provincial pension plans. With longer life expectancies and the aging of the population, the best prospects for insurance salespeople should be in retirement insurance. Deregulation and stiff competition are forcing small insurance companies to merge with large ones, thus reducing employment opportunities for insurance salespeople and agents. On the other hand, the deregulation of the financial industry means that insurance companies can now sell trust services and financial products, and this could create new job openings for these workers. Customers' need for information about the range of new insurance products, of which life insurance is only one among many, is tending to reorient the role of insurance agents toward that of general financial consultant. This new orientation in their duties may brighten the employment outlook for this occupational group. Knowledge of developments on the financial services market is an asset. At the same time,

4. LABOUR MARKET TRENDS (cont'd)

jobs may open up for those who specialize and acquire a knowledge of everything related to insurance. The use of computer technology is widespread in the insurance field and has had an impact on the tasks of insurance agents. A number of functions can now be carried out by means of computers, such as registering clients, policies and amendments, producing claims, bills and commission claims, cost analyses, etc. Enhanced performance on the part of insurance salespersons due to the use of computer technology and continued rationalization should be sufficient to spark demand for services related to this field. In addition, deregulation of financial intermediaries, competition between insurance brokers and insurance salespersons should increase since brokers now offer life insurance policies in addition to general insurance policies. This situation could tighten the labour market for insurance salespersons and agents even more.

5. EDUCATION AND SKILLS

Secondary school graduation is usually required. A community college diploma in business administration, insurance option, is an asset. Candidates wishing to sell insurance must be at least 18 years of age and have a special permit to work as insurance salespersons.

6. SALARY

According to the 1986 census, the average salary of insurance brokers and agents working full time was $28,551.

REAL ESTATE SALESMEN 5172

Examples: Apartment Rental Agent, Real Estate Appraiser, Real Estate Salesperson, Real Estate Agent

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
10,280	10,685	405	3,135	3,540

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
270	0	0	110	380

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	39.1	41.0	Under 25 years	7.0	-	Full-time	92.9	91.6
Males	60.9	59.0	Over 54 years	16.2	-	Part-time	7.1	8.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Finance, Insurance and Real Estate (100)
- Insurance and Real Estate Agencies (91)
- Real Estate Operators (9)

4. LABOUR MARKET TRENDS

Below-average employment growth is forecast. Job openings will be created mainly through attrition of the present labour force. Employment opportunities for real estate agents depend on the condition of the housing market, interest rates, population distribution and economic growth. Technological advances such as the computerization of brokerage firms and the use of audiovisual techniques and electronic media make the tasks of real estate brokers easier. The use of database software covering all aspects related to purchasing a house, a commercial or industrial building or a piece of land allows brokers to quickly consult files, update them from a distance and use accounting systems. The possibility of consulting this database at the client's, using a microcomputer, presents an advantage to real estate agents who are familiar with these software packages. The deregulation of the financial sector is conducive to the formation of multidisciplinary teams providing a range of services. The merging of different types of brokers' offices such as real estate brokers, insurance brokers and securities brokers may continue gradually, resulting in financial supermarkets. The demand for real estate brokers could be adversely affected.

5. EDUCATION AND SKILLS

Secondary school graduation is usually required for entry to these occupations. For real estate appraisers, a university degree in business administration, with a specialization in real estate management (appraisal), is required. Membership in the Quebec Association of Chartered Appraisers is mandatory only for those who wish to use the title. For real estate agents, the provincial Real Estate Association now requires new candidates to complete the course organized by the Quebec Real Estate Association. New agents must have completed a minimum of 120 hours of classes and brokers, 360 hours of classes if they wish to obtain authorization to practise. A license from the Real Estate Brokerage Division of the Quebec Department of Justice must be obtained.

6. SALARY

According to the 1986 census, the average salary of real estate agents working full time was $30,861.

SALESMEN AND TRADERS, SECURITIES 5173

Examples: Bond Dealer, Floor Trader, Securities Trader, Foreign Exchange Dealer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,740	2,920	180	1,170	1,350

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
40	0	0	595	635

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	23.1	23.7	Under 25 years	8.7	-	Full-time	92.1	93.5
Males	76.9	76.3	Over 54 years	19.9	-	Part-time	7.9	6.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Finance, Insurance and Real Estate (93)
- Banks (15)
- Other Credit Agencies (3)
- Security Brokers (48)
- Investment companies (9)
- Insurance Carriers (4)
- Insurance and Real Estate Agencies (13)
- Real Estate Operators (1)

4. LABOUR MARKET TRENDS

Below-average employment growth is forecast. Most job openings will result from the need to replace current employees. Since economic conditions affect investment spending and commercial activity, they also affect employment opportunities for those who deal in securities in the financial, insurance and real estate sectors. The brokerage industry is in full transition. With deregulation of both the financial services industry and the activities of financial institutions, competition between brokerage firms has increased. On the one hand, we have seen the appearance of small specialized firms offering specialized services and new products and, on the other hand, the consolidation of "mega-firms". The demand for securities brokers could be stimulated by increased activity on the part of Canadian banks on the international markets and the expanded range of financial services offered. The growth of discount brokerage services where clients pay reduced commission rates is competing with traditional brokerage services.

4. LABOUR MARKET TRENDS (cont'd)

With the increasing demand for SSPs, RRSPs and other financial vehicles, the need for financial consultants is growing and could create openings for securities brokers who can practise as such. New technologies have had an impact on the tasks of brokers. Computer systems that transmit information on the number of transactions per company, the most recent transactions, rates, etc., facilitate and speed up the work of these brokers. Knowledge of these systems is an asset for brokers. Good interpersonal skills are also in demand. Brokers generally have an active social life since they must take part in groups and associations where they recruit their clientele.

5. EDUCATION AND SKILLS

The qualifications required for these occupations vary from specialty to specialty, but candidates must have at least completed secondary school. Though no university course yet exists in this area, a business administration course, finance option, is an asset for securities brokers. Successful completion of a correspondence course in securities trading in Canada given by the Canadian Securities Institute is necessary in order to work as a securities broker. To become a fellow of the Institute, candidates must have completed an advanced course on investment financing in Canada. Independent brokers are not required to take the examination set by the Investment Dealers Association of Canada. Completion of a two-to-three week Canadian mutual fund course is required for selling mutual funds; those who wish to sell other types of securities must complete a three-to-six month Canadian securities course. Registration with the provincial register kept by the Quebec Securities Commission is mandatory.

6. SALARY

According to the 1986 census, the average salary of securities brokers working full time was $45,218. Some brokers receive a basic salary plus commission, while others work solely on a commission basis.

ADVERTISING SALESMEN 5174

Examples: Advertising Salesperson, Radio and Television Salesperson, Publicity Agent

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			NEW JOB OPENINGS	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,980	2,550	570	545	1,115

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
60	0	0	0	60

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	37.7	41.6	Under 25 years	17.2	-	Full-time	92.9	93.2
Males	62.3	58.4	Over 54 years	7.8	-	Part-time	7.1	6.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Business Services (36)
- Advertising Services (33)
- Management Cons. Off. (2)
- Misc. Services (1)

Printing, Publishing Ind.(29)
- Commercial Printing (4)
- Publishing Only (12)
- Publishing and Printing (13)

Communication (13)
- Radio and Tel. Broadcasting (13)

4. LABOUR MARKET TRENDS

Above-average employment is forecast. In an increasingly competitive economy, the need intensifies for companies to promote and advertise their products. This may increase employment prospects for these occupations. The best job opportunities are found in the smaller specialized firms or in the large integrated agencies. The trend toward advertising in a number of different media should grow. In magazines, advertising is increasingly taking the form of inserts and advertisements of several pages that fold out. Stagnation in the advertising budgets of the large clients has forced advertising agencies to shift toward public relations, direct marketing and promotion budgets. In addition to the traditional services, such as customer service and the creation and placement of advertising in the media, integrated agencies are starting to offer services such as research, promotion, direct adverting, graphic design and public relations. These new orientations may stimulate the creation of jobs for advertising agents.

5. EDUCATION AND SKILLS

Secondary school graduation and sales experience are generally required. However, many employers are looking for candidates with a community college diploma or university degree in marketing or business administration. Good communication skills are in demand.

6. SALARY

According to the 1986 census, the average salary of advertising agents working full time was $29,739.

FIREFIGHTERS 6111

Examples: Crash Firefighter, Firefighter, Fire Inspector, Fire Truck Driver

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
4,985	5,650	665	665	1,330

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
215	1,070	5	0	1,290

OTHER IMPORTANT REQUIREMENTS

The demand for firefighters depends on public spending budgets and the size of the population served.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	0.6	1.3	Under 25 years	-	-	Full-time	-	98.6
Males	99.4	98.7	Over 54 years	-	-	Part-time	-	1.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Service (92)
- Defence Services (2)
- Other Federal Service (1)
- Provincial Service (2)
- Local Gov't Service (87)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a rate slightly below the average, based on the outlook in the public administration sector. Employment in this occupational group is relatively unaffected by market fluctuations, but is more dependent on the size of the population served and public spending. While technological changes have improved firefighters' performance, they have not had any significant effect on employment. Firefighters' equipment has improved considerably and firefighting techniques have been refined. In addition to the role of "firefighter" as such, the role of these workers is expanding to include preventive work. Public education, preventive inspections and the development of simulated intervention plans are becoming an increasing part of firefighters' work. Also, their intervention role is expanding, especially in situations where public security is endangered, such as ecological disasters, breakdowns of electric installations, etc.

5. EDUCATION AND SKILLS

Entry to this occupation requires a secondary school diploma in fire prevention with a specialization in firefighting. In the Montreal region, Saint-Maxime secondary school offers courses in firefighting. Firefighters may undergo on-the-job training throughout their careers. In some cases, firefighting experience may lead to a permanent firefighter position.

6. SALARY

According to the 1986 census, the average salary of firefighters working full time was $36,296.

POLICE OFFICERS AND DETECTIVES, GOVERNMENT 6112

Examples: Constable, Traffic Officer, Highway Patrol Officer, Fingerprint Technician, Police Officer, Detective

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
15,020	17,815	2,795	1,580	4,375

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
295	65	1,280	625	2,265

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	2.3	4.4	Under 25 years	8.6	-	Full-time	99.2	98.9
Males	97.7	95.6	Over 54 years	4.8	-	Part-time	0.8	1.1

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Gov't Service (100)
- Other Federal Service (9)
- Provincial Service (32)
- Local Gov't Service (59)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a rate slightly above the average. Employment in this occupational group is sensitive to budgetary fluctuations which have an adverse effect on the allocations made by governments to police forces. Entry to police officers' jobs is difficult and sometimes involves a long wait. Police officers may work in a range of areas such as patrols, criminal investigations, detention, legal identity, prevention, youth protection and public relations. Good interpersonal skills are sought after. Candidates for jobs in this occupational group must be available to work three out of five weekends, both day and night. Private detective agencies may offer job openings for police officers. New specialties are opening up in which investigators must be capable of doing sophisticated accounting, working with computers or identifying industrial spies.

According to the Police Act, in order to become police officers candidates must be Canadian citizens, have no criminal record, have a driver's license, have completed Secondary V and be at least 18 years of age. Also, women must be at least 5" 3" tall and men, 5" 7" tall.

5. EDUCATION AND SKILLS

Secondary school graduation or, preferably, a community college diploma in police technology is required. Completion of a training course at the Nicolet Police Institute is compulsory for employment in a municipal police force or the Quebec Provincial Police. Only candidates referred by employers are accepted at the Institute. Municipalities with a high population density require police job applicants to reside in the municipality. Bilingualism is a major asset. To go from one grade to the next, candidates must pass examinations, an interview and have the necessary leadership qualities. Good interpersonal skills are in demand. To become an investigator, candidates must have five years' experience in the police force and pass a series of courses and aptitude tests.

6. SALARY

According to the 1986 census, the average salary of police officers and official police detectives working full time was $36,053.

GUARDS AND WATCHMEN 6115

Examples: Armoured Car Guard, Night Watchman, Prison Guard, School Crossing Guard

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
25,310	25,700	390	11,110	11,500

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
2,745	305	320	230	3,600

OTHER IMPORTANT REQUIREMENTS

Many jobs are part-time.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	18.8	24.4	Under 25 years	17.3	-	Full-time	90.5	86.3
Males	81.2	75.6	Over 54 years	28.8	-	Part-time	9.5	13.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Business Services (36)
- Employment Agencies (2)
- Security Services (34)

Gov't Service (20)
- Other Federal Service (6)
- Provincial Service (6)
- Local Gov't Service (8)

Education (15)
- Elem. and Sec. Schools (15)

Health and Social Services (6)
- Hospitals (3)
- Related Health Care Inst. (3)

4. LABOUR MARKET TRENDS

Employment in this occupational group is expected to remain relatively stable. Job openings will be created mainly through attrition. The large size of this occupational group means that the total number of job openings will remain high, i.e. nearly 11,500 jobs during the forecast period. Many jobs are part-time. Overtime may be required and employment may be on an on-call basis (day, night, weekends). Such technological advances as electronic surveillance systems and video surveillance are making the work of security guards easier.

5. EDUCATION AND SKILLS

Although no specific educational qualifications are required for entry to this occupation, a high-school diploma is desirable. Depending on the job, candidates may be required to have a valid driver's license, no criminal record and undergo a medical examination. Guards must be licensed by the Quebec Provincial Police and be at least 18 years of age. Uniforms must be worn. A community college diploma in correctional technology is an asset for criminology technicians and correctional officers.

6. SALARY

According to the 1986 census, the average salary of security guards working full time was $20,210.

SUPERVISORS: FOOD AND BEVERAGE PREPARATION AND RELATED SERVICE OCCUPATIONS

6120

Examples: Maitre d'hôtel, Caterer, Cooking Supervisor

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
9,880	10,570	690	2,585	3,275

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
1,185	240	135	120	1,680

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	28.2	35.3	Under 25 years	10.9	-	Full-time	93.2	92.7
Males	71.8	64.7	Over 54 years	12.3	-	Part-time	7.8	7.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Accommodation and Food Services (88)
- Hotels and Motels (6)
- Restaurants (82)

4. LABOUR MARKET TRENDS

Below-average employment growth is forecast. Most job openings will be created through attrition of the present labour force and the need to replace those leaving their jobs. New technologies are changing the tasks of supervisors in this occupational group. New cash registers that automatically regulate the prices of menus and record all sales reduce the amount of time supervisors must devote to budgeting and sales and to monitoring waiters/waitresses. The use of computer software makes it possible to better manage purchases, stocks, control and billing. The greater spread of these technologies may have an adverse effect on the demand for supervisors. However, knowledge of computer software is an asset for those who wish to enter supervisory positions. The growing popularity of fast-food restaurants, which could become even more automated, the increased use of fast-frozen or vacuum-packed pre-prepared menus even by fine restaurants, certain hospitals and airline catering companies could slow down the employment growth for these supervisors. The growing population, the increase in disposable income and the greater amount of time devoted to recreation could mean improved job opportunities for caterers, given that consumers spend less time preparing meals. As the industry matures and adjusts to

4. LABOUR MARKET TRENDS (cont'd)

technological change, this group's responsibilities must go beyond culinary art to acquiring managerial skills. Advancement opportunities within this group are better for waiters/waitresses who serve in the larger restaurants.

5. EDUCATION AND SKILLS

It is possible for candidates to enter this occupational group without any particular school training if they have good work experience. However, it is becoming increasingly important to acquire an education. Thus, for food service management workers and restaurant director-managers, a community college diploma, food services management technology option, is preferable. A high-school diploma in restaurant services is an asset for those who wish to enter food service supervisory or banquet captain positions. In general, managerial and supervisory skills are in demand.

6. SALARY

According to the 1986 census, the average salary of workers specialized in food and beverage preparation and related services working full time was $19,837.

CHEFS AND COOKS 6121

Examples: First Cook, Grill Chef, Logging Camp Cook, Short-order Cook, Pastry Cook

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
54,005	70,400	16,395	13,745	30,140

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
8,220	4,825	435	0	13,480

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	47.3	45.6	Under 25 years	37.4	-	Full-time	84.0	81.1
Males	52.7	54.4	Over 54 years	9.2	-	Part-time	16.0	18.9

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Accommodation and Food Serv. (68)
- Hotels and Motels (5)
- Restaurants (63)

Health and Social Services (14)
- Hospitals (7)
- Related Health Care Inst. (7)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast, due to the expected expansion of the hospitality sector. Though certain factors tend to slow down the demand for restaurant services, there are others that favour their growth. The decline in demographic growth and the aging population could have an adverse effect on the demand for restaurant services, and consequently for chefs and cooks. At present, elderly people generally do not frequent restaurants as much as young people do, particularly fast-food restaurants. Nonetheless, these negative effects tend to be offset by several other factors. Factors such as smaller families, a greater number of single-person households, higher incomes and the increasing presence of women in the labour force mean a growing demand for restaurant services and, consequently, an increased demand for chefs and cooks. Restaurants are tending to diversify. The overall increase in level of education and new concerns on the part of the public about a more healthful way of eating should spur the appearance of more specialized restaurants, as opposed to standard restaurants, and restaurants with a more dietetic approach to food, particularly for elderly consumers. The growing popularity of specialized restaurants with a unique approach and a warm atmosphere where client hospitality and personalized service are the focal points may create good employment opportunities for chefs and cooks interested in this area. The demand for experienced cooks is constant. Chefs must be familiar with such new technologies as microwave cooking.

4. LABOUR MARKET TRENDS (cont'd)

It is unlikely that these technological changes will affect the total number of jobs for this occupational group. The continual spread of fast-food services may serve to increase the demand for cooks in this area. However, if the automation of this type of food services and the use of fast-frozen or vacuum packed pre-prepared meals in all types of restaurants continues, the demand for cooks may give way to the demand for cooking technicians whose tasks would centre on meal distribution.

5. EDUCATION AND SKILLS

A large number of chefs and cooks started their careers as dishwashers or waiters/waitresses and it is through acquired experience and the job opportunities they encountered that they obtained their present positions. Although this path is still possible, entry to this occupation increasingly requires a secondary vocational course, professional cooking option, or a two-year professional cooking program offered by the Quebec Tourism and Hotel Institute. For pastry cooks, a secondary school diploma, pastry option is an asset.

6. SALARY

According to the 1986 census, the average salary of chefs and cooks working full time was $15,092.

WAITERS, HOSTESSES, STEWARTS, FOOD AND BEVERAGE 6125

Examples: Waiter/Waitress, Counter Attendant, Caterer Helper

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
55,965	77,145	21,180	13,310	34,490

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
6,775	3,645	445	1,040	11,905

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	82.0	79.8	Under 25 years	45.1	-	Full-time	73.9	79.6
Males	18.0	20.2	Over 54 years	3.5	-	Part-time	26.1	20.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Accommodation and Food Services (90)
- Hotels and Motels (9)
- Restaurants (81)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate, given the forecast growth in the hospitality sector. The personnel turnover rate in this group is high compared to other occupations and could give rise to additional job openings. New consumer habits such as eating meals outside the home and the wide range of restaurants could change the skills required for certain categories of waiters/waitresses. The growth outlook for fast-food services is good, and could have a positive impact on employment opportunities for waiters/waitresses in this area. However, new technologies are changing the duties of these workers, particularly in fast-food chain restaurants. With an electronic keyboard and a screen, waiters/waitresses can place an order directly from the restaurant to the kitchen by using pre-established codes, and they can also be informed as soon as the order is ready. Technological advances facilitate and speed up the work of waiters/waitresses in this type of restaurant, especially by reducing the amount of moving around they have to do. Fast-food restaurants can become even more automated, to the point of complete automation, which could reduce the number of waiters/waitresses required in these establishments. In independent restaurants, traditional equipment is generally still being used. Also, growing public demand for more specialized restaurants with a warm atmosphere and personalized service may stimulate the demand for waiters/waitresses working in this area. Qualities such as interpersonal skills, courtesy and good personal appearance are assets.

4. LABOUR MARKET TRENDS (cont'd)

Overall, there is a certain amount of seasonal fluctuation in this occupational group and part-time work is common. Bilingualism is an asset.

5. EDUCATION AND SKILLS

No particular schooling is required. Large fast-food chains often provide their personnel with on-the-job training, usually by means of a video. However, completion of a secondary vocational course in waiter/waitress training is an asset. Good interpersonal skills are sought after by employers.

6. SALARY

According to the 1986 census, the average salary of those specialised in food and beverage serving occupations working full time was $10,427.

FUNERAL DIRECTORS, EMBALMERS AND RELATED OCCUPATIONS 6141

Examples: Mortician, Embalmer, Crematorium Attendant, Thanatologist

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
980	1,045	65	445	510

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
25	-	-	-	25

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	9.9	16.4	Under 25 years	8.3	-	Full-time	89.3	88.7
Males	90.1	83.6	Over 54 years	23.5	-	Part-time	10.7	11.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Personal Services (100)
- Funeral Services (100)

4. LABOUR MARKET TRENDS

Below-average employment growth is forecast. Most of the job openings on the labour market will be due to attrition. Employment in this occupational group is concentrated in the personal services sector and is not vulnerable to economic fluctuations since it largely depends on demographic factors. While the aging of the population will mean a steady demand for the services of this group, the number of job openings should remain relatively stable. Working hours are very irregular. Embalmers are often required to work on-call, during the day or night, which means that they must be very flexible.

5. EDUCATION AND SKILLS

A community college diploma in thanatology is required. Membership in the Order of Thanatologists of Quebec is mandatory for those wishing to practise in the province. Bilingualism is an asset.

6. SALARY

According to the 1986 census, the average salary of morticians, embalmers and those in related occupations working full time was $24,022.

BARBERS, HAIRDRESSERS AND RELATED OCCUPATIONS 6143

Examples: Hair Stylist, Cosmetologist, Manicurist, Make-up Artist, Beauty Salon Proprietor

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
31,860	36,270	4,415	7,570	11,980

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
1,615	15,805	15	0	17,435

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	74.2	80.6	Under 25 years	36.6	-	Full-time	82.8	85.6
Males	25.8	19.4	Over 54 years	5.8	-	Part-time	17.2	14.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Personal Services (94)
- Barber and Beauty Shops (90)
- Misc. Personal Services (4)

4. LABOUR MARKET TRENDS

Below-average employment growth is forecast, and the labour supply is expected to exceed the demand. Deregulation of the hairstyling sector has brought about keen competition between companies and the appearance of many hairstyling salons. Deregulation has also given rise to the "desexualization" of salons, so that both men and women can have their hair done in the same salon and by the same hair stylist. Personal qualities such as creativity are very much in demand. Administrative skills in supervision, hiring and training are assets for those who wish to become beauty salon proprietors or managers. Most job openings are available in medium-sized and large cities.

5. EDUCATION AND SKILLS

Completion of a secondary vocational course in men's or women's hairdressing or beauty care or a training course in a recognized private school or in a beauty salon under the supervision of a qualified specialist is required. Electrolysis training is necessary for beauticians.

6. SALARY

According to the 1986 census, the average salary of hairdressers and related workers working full time was $12,973.

HOSTESSES, STEWARDS, EXCEPT FOOD AND BEVERAGE 6145

Examples: Flight Attendant, Airline Steward/Stewardess, Recreation Manager, Social Director

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
925	1 215	290	240	530

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
120	-	-	-	120

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	66.5	64.1	Under 25 years	-	-	Full-time	-	96.7
Males	33.5	35.9	Over 54 years	-	-	Part-time	-	3.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation (94)
- Air Transport (87)
- Services Incidental to Air Transport (4)
- Railway Transport (3)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. Some 530 jobs should open up during the forecast period. The employment outlook could improve for airline hostesses following the deregulation of the transportation sector. Technological changes affecting the occupations of airline hostess and maitre d'hôtel are few and have not had any repercussions on employment. Seasonal fluctuations, particularly in the summer months, give rise to greater job opportunities.

5. EDUCATION AND SKILLS

The minimum entry requirement for these occupations is a secondary school diploma. Preference is given to those who have completed postsecondary studies and who have several years of experience. Airline companies provide flight attendants who have completed Secondary V with a one-month on-the-job training period. Candidates must be at least 18 years old and be 1 m 57 cm (5'2") tall. Good communication skills in both French and English are essential for companies providing international services. Candidates must undergo a medical examination.

6. SALARY

According to the 1986 census, the average salary of hostesses and those in related occupations not specialized in food and beverages who were employed full time was $26,759.

JANITORS, CHARWORKERS AND CLEANERS 6191

Examples: Janitor, Chimney Sweep, Floor Cleaner, Washroom Attendant, Window Cleaner, Charworker

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
63,960	73,235	9,280	23,470	32,750

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
6,550	1,200	75	965	8,790

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	31.6	32.0	Under 25 years	25.2	-	Full-time	85.8	81.4
Males	68.4	68.0	Over 54 years	20.8	-	Part-time	14.2	18.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Health and Social Services (19)
- Hospitals (13)
- Related Health Care Inst. (6)

Food and Accommodation Ind. (7)
- Hotels and Motels (3)
- Restaurants (4)

Misc. Services (19)
- Services to Buildings (19)

Finance, Ins. & Real Estate (6)
- Real Estate Operators (6)

Education (14)
- Elem. and Sec. Schools (11)
- Postsecondary Schools (1)
- Universities and Colleges (2)

4. LABOUR MARKET TRENDS

Employment is expected to grow at about the average rate. Job openings will be created mainly through attrition. The number of cleaning companies could increase under the combined impact of labour market trends and consumer needs. The massive entry of women into the labour force, the increase in household incomes, the trend toward keeping elderly and disabled persons at home could spur the demand for maintenance services, and thus for janitors and domestic workers and cleaners. In general, technological changes have made the tasks of janitors easier, but have had no impact on employment as such. Because of the diversity of janitors' tasks, a knowledge of electricity, plumbing and carpentry and other technical fields is an asset.

5. EDUCATION AND SKILLS

No specific qualifications are needed. Most workers receive their training on the job.

6. SALARY

According to the 1986 census, the average salary of janitors and those employed in domestic and cleaning occupations who were working full time was $17,722.

OCCUPATIONS IN LABOURING AND OTHER ELEMENTAL WORK: OTHER SERVICES

6198

Examples: Auto Washer, Checkroom Attendant, Dishwasher, Door Tender, Laundry Labourer, Shoe Shiner

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
10,660	11,050	390	1,810	2,200

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
1,460	1,000	75	0	2,535

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	21.1	20.7	Under 25 years	62.6	-	Full-time	76.2	71.4
Males	78.9	79.3	Over 54 years	7.8	-	Part-time	23.8	28.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Accommodation and Food Serv. (56)
- Hotels and Motels (10)
- Restaurants (46)

Retail Service (13)
- Gasoline Service Stations (7)
- Motor Vehicle Dealers (5)
- Motor Vehicle Repair Shops (1)

Health and Social Services (10)
- Hospitals (7)
- Related Health Care Inst. (3)

4. LABOUR MARKET TRENDS

Employment in these occupations should remain stable. Most job openings will be created through attrition. The labour supply may exceed the demand.

5. EDUCATION AND SKILLS

No specific qualifications are necessary. Door tenders are provided with a brief training period on the job. Bilingualism is an asset.

6. SALARY

According to the 1986 census, the average salary of labourers in these services working full time was $14,568.

FARMERS (PLUS 7113 - LIVESTOCK FARMERS, 7115 - CROP FARMERS, AND 7119 - FARMERS, NOT ELSEWHERE CLASSIFIED)

7111

Examples: Farmer, Fruit Farmer, Tomato Farmer, Poultry Farmer, Maple Syrup Maker, Nursery Farmer, Flower Grower

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
17,925	14,125	-3,800	6,835	3,035

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
500	-	20	-	520

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	-	-	Under 25 years	-	-	Full-time	-	-
Males	-	-	Over 54 years	-	-	Part-time	-	-

3. MAIN SECTOR PROVIDING EMPLOYMENT (1986 %)

Agriculture (100)

4. LABOUR MARKET TRENDS

Employment in this occupational group is expected to decline. New job openings will be created mainly through attrition of the present labour force. Over the 1980s, the trend toward the expansion of farms and the reduction in their number translated into a decrease in the number of farmers. This trend should continue during the forecast period. The purchase of a farm requires a large investment. A strong dependence on debt financing makes the sector vulnerable to interest rate fluctuations.

Workers in this occupational group are either owners or tenants of a farm. The most common way for young farmers to enter this occupation is by taking over the family farm at an early age or to form associations with other family members. However, it is becoming increasingly difficult to recruit new farmers. One of the characteristics of the agricultural sector is the rapid growth in the number of salaried workers in relation to farm producers. This trend should continue together with the remuneration of offspring who work on the farm, the more frequent grouping of farms into companies or corporations and the change in the status wives who help to run the farm. The growing reliance on paid labour is linked to the increasingly limited growth and development of capital. As farms become larger, it is more and more difficult for farmers to adjust well to the departure of

4. LABOUR MARKET TRENDS (cont'd)

workers. It is difficult to compensate for the departure of young family members from farm life by downsizing production. Remuneration of children's work may become a strong incentive for this, or their replacement by other salaried workers may prove necessary.

Farms are becoming increasingly specialized and require a qualified labour force with a knowledge of farming activities. For aspiring farmers, basic training in agriculture is essential as well as a good knowledge of business administration and computer systems related to the field of agriculture. New production technologies involving equipment used in the fields and livestock feeding systems are related to the use of electronic control systems. Because of the growing mechanization of agriculture, farmers must increasingly be able to master the operation and maintenance of farm machinery. With developments in genetics applied to animal breeding (artificial insemination, frozen embryos, etc.), significant changes are taking place in reproduction techniques and in the tasks of livestock farmers. Knowledge of farm management computer systems, particularly in accounting and financial planning, is becoming increasingly necessary for farmers.

For nursery farmers, opportunities are opening up due to the government's intensive reforestation policies, particularly for nursery sub-contractors whose activities are focused on forest operations. The appearance of plants in containers replacing bare-root plants has had an impact on the tasks and handling processes in nurseries.

5. EDUCATION AND SKILLS

There is no particular educational requirement for entry to this occupational group. Farm experience and a good knowledge of farm management is an asset. Completion of the secondary vocational course in agricultural technology, animal production option, is generally required for livestock farmers. For farmers who raise small animals, a community college diploma in natural sciences technology, with a specialization in animal health may be useful. For all farmers a community college or university training in one of the farming specialties is a definite advantage.

6. SALARY

According to the 1986 census, the average salary of farmers working full time was $19,875.

FARM MANAGEMENT OCCUPATIONS 7131

Examples: Hatchery Manager, Landscaping Manager, Farm Manager

1. LABOUR MARKET FROM 1989 TO 2000

JOBS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
7,795	11,925	4,130	2,605	- 6,735

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
40	-	-	-	40

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	-	19.1	Under 25 years	-	-	Full-time	-	91.4
Males	-	80.9	Over 54 years	-	-	Part-time	-	8.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Not available.

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. The trend toward larger farms, diversified production and the grouping into companies or corporations of an increasing number of farms may boost the demand for farm managers. In general, the larger the farm, the more important and complex the tasks of the manager. Technological changes in the agricultural sector have had an impact on production and machinery. New production technologies are mainly linked to the use of electronic systems on the equipment used in the fields and in livestock feeding systems as well as in genetic development (frozen embryos, etc.). Knowledge of new farm machinery as well as new growing techniques are major assets. The computerization of farm management, particularly accounting and financial planning, is quite widespread. Candidates with a basic knowledge of accounting, bookkeeping and farm management computer systems will have a competitive edge.

4. LABOUR MARKET TRENDS (cont'd)

Job prospects are good for managers with basic training in agriculture and a good knowledge of business administration, marketing and sales. Skills in personnel management and the ability to communicate are major assets.

5. EDUCATION AND SKILLS

Although there is no educational requirement for entry to this occupational group, a community college or university education is an asset. Candidates must have training in agriculture or several years' experience on a farm.

6. SALARY

According to the 1986 census, the average salary of farm managers working full time was $14,886.

NURSERY AND RELATED WORKERS 7195

Examples: Park Worker, Landscape Gardener, Nursery Worker, Peat Moss Layer

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
15,245	20,070	4,825	4,040	8,865

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
2,000	480	35	1,915	4,430

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	7.5	11.7	Under 25 years	42.6	-	Full-time	100.0	88.5
Males	92.5	88.3	over 54 years	12.1	-	Part-time	-	11.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Construction Ind. (31)
- Special-trade Contractors (31)

Gov't Service (17)
- Other Federal Service (2)
- Provincial Service (2)
- Local Gov't Service (13)

Agriculture (13)
- Experimental Farms (11)
- Farm Services (2)

Amusement and Recreation (8)
- Golf Clubs (6)
- Misc. Services (2)

Forestry (7)
- Forestry Services (7)

Personal Services (5)
- Private Households (3)
- Misc. Personal Serv. (2)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. Growing consumer demand for indoor plants and landscaping should stimulate job prospects for nursery workers. Quebec's new forest development policy, which stresses reforestation and forest management, should create considerable demand for nursery workers. Under the policy, harvesting would be limited to actual forest capacity, meaning that for every tree cut down another would have to be planted. Technological advances have had very little impact on employment for this group.

5. EDUCATION AND SKILLS

While there is no educational requirement for this occupational group, employers often prefer candidates who have completed the ornamental horticulture option of the secondary vocational course in agricultural technology. For some jobs, a community college diploma in ornamental horticulture may be an asset.

6. SALARY

According to the 1986 census, the average salary of nursery and related workers who were employed full time was $19,730.

FARM MACHINERY OPERATORS 7197

Examples: Farm Machinery Operator, Field Crop Sprayer Operator, Regular Farm Machinery Operator and Contractual Farm Machinery Operator, n.e.c.

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
710	935	225	225	450

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
45	-	-	-	45

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	-	-	Under 25 years	-	-	Full-time	-	-
Males	-	-	Over 54 years	-	-	Part-time	-	-

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Agriculture (70)

Agricultural Services Ind. (6)
- Serv. Related to Livestock Breeding and Animal Specialties (6)

Indust., Fishing and Trapping (3)
- Specialized Contractors (3)
- On-site Work (3)

4. LABOUR MARKET TRENDS

Above-average growth is forecast. Larger-sized farms, increased mechanization and greater production specialization are factors that will boost employment in this occupational group. The trend toward hiring salaried workers, such as farm machinery operators who often make up for the lack of succession, should continue. New production technologies involving field equipment are having a positive impact on employment prospects for these workers. In addition to skills in mechanics, a knowledge of electronics could become an asset due to the routine maintenance and minor repairs that operators must carry out on their machinery.

Work in this occupational group is mainly seasonal with peak periods in summer and autumn. Operators may be required to work long hours in order to take advantage of daylight.

5. EDUCATION AND SKILLS

Though no specific qualifications are required, a one- to six-month on-the-job training period is necessary. Training in farm machinery mechanics is an asset. An appropriate driving permit is required. Secondary school studies and post-secondary courses in agriculture or horticulture are also an asset.

6. SALARY

According to the 1986 census, the average salary of farm machinery operators working full time was $20,203. These workers may be paid either on a salary or lump sum basis.

CAPTAINS AND OTHER OFFICERS, FISHING VESSELS 7311

Examples: Trawler Captain, Boatswain, Mate

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
145	230	85	85	170

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
10	-	-	-	10

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	9.1	1.1	Under 25 years	18.1	-	Full-time	-	100.0
Males	90.5	98.9	Over 54 years	9.1	-	Part-time	-	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Hunting and Fishing (88)	Food and Beverages Ind. (8)
- Fishing (88)	- Fish Products Ind. (8)

4. LABOUR MARKET TRENDS

Above-average employment growth is forecast. In our opinion, the employment level given above underestimates the real number of jobs in these occupations, since Quebec reportedly had in excess of 3,000 fishing vessels in 1982. Opportunities in this occupational group are largely seasonal since fishing is done mainly in spring and summer. Most captains of fishing vessels are relatively small- scale operators and may employ as many as seven helpers. Large sea-going trawlers account for fewer than one per cent of all fishing vessels, but a trend toward more factory freezer trawlers used in offshore activity may limit the opportunities for vessels captains. These developments may also change the structure of the industry. Fishing operations may become more integrated as fish processing is carried out offshore. Fishing activity and therefore employment opportunities are dependent upon a number of factors. The price of fish, regulation of the fish supply by the federal government, territorial fishing rights, quotas and the value of the Canadian dollar vis-à-vis European and U.S. currencies have had a marked effect on job opportunities.

5. EDUCATION AND SKILLS

Completion of the secondary vocational course in commercial fishing, or a community college diploma in fishing techniques, harvesting and management option, is usually required. Candidates must be at least 19 years of age and be certified by vessel type and the waters they wish to sail in. Certification may be obtained after 5 to 8 years of on-the-job experience. Knowledge of how to use a compass as well as navigation maps and charts is essential

6. SALARY

According to the 1986 census, owners and mates of fishing vessels working full time was $23,975.

TIMBER CUTTING AND RELATED OCCUPATIONS 7513

Examples: Tree Harvester Operator, Chain-saw Operator, Timber Marker, Lumberjack, Busher, Faller

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
7,080	5,020	-2,060	780	-1,280

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
3,680	105	-	-	3,785

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	-	0.0	Under 25 years	-	-	Full-time	-	100.0
Males	-	100.0	Over 54 years	-	-	Part-time	-	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Forestry (79)
- Logging (76)
- Forestry Services (3)

Wood Industries (9)
- Sawmills, Planing Mills and Shingle Mills (9)

Paper and Allied Ind. (2)
- Pulp and Paper Mills (2)

4. LABOUR MARKET TRENDS

This occupational group is expected to lose employment. Jobs created through attrition of the present labour force will constitute the only openings and will not be sufficient to offset the anticipated loss of employment. New production processes will have an impact on the demand for lumberjacks. With the widespread implementation of "whole tree" cutting, consisting in bringing down the tree without removing its branches, sawing activities should be reduced somewhat. Consequently, the demand for traditional lumberjacks is expected to drop dramatically, to the benefit of tree feller and feller buncher operators. Operators increasingly own the equipment they use. A knowledge of mechanics for basic maintenance of these machines is an asset.

5. EDUCATION AND SKILLS

There is no specific educational requirement. On-the-job training is often required. However, a secondary course in the operation of heavy forest machinery, hauling machines, jammers and sawing machines option, is an asset.

6. SALARY

According to the 1986 census, the average salary of lumberjacks working full time was $21,061. Forestry workers are often paid on a lump sum basis.

LOG INSPECTING, GRADING, SCALING AND RELATED OCCUPATIONS

7516

Examples: Log Grader, Wood Scaler, Timber Cruiser, Pulpwood Scaler, Log Culler

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
480	365	-115	90	-25

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
175	-	-	-	175

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	2.1	8.5	Under 25 years	28.5	-	Full-time	97.3	100.0
Males	97.9	91.5	Over 54 years	9.7	-	Part-time	2.7	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Forestry (61)
- Logging (49)
- Forestry Services (12)

Paper and Allied Industries (16)
- Pulp and Paper Mills (16)

Wood Industries (9)
- Sawmills (9)

Gov't Service (5)
- Provincial Service (5)

4. LABOUR MARKET TRENDS

This occupational group is expected to undergo a decrease in the labour supply. Available jobs will be created through attrition of the present labour force. This group of occupations is very sensitive to the economic climate. Increased competition on outside markets, for both wood and paper, and increased foreign protectionism have slowed down employment growth in this group. Technological changes have made certain occupations obsolete; for example, the automation of scaling operations has eliminated the job of "scaler's helper".

5. EDUCATION AND SKILLS

A community college diploma in forest technology, forest management option, is an asset for timber cruisers. For log scalers and log cullers, a secondary vocational diploma in scaling and grading is an asset.

6. SALARY

According to the 1986 census, the average salary of log inspectors, log scalers, log cullers and related workers who were employed full time was $27,218.

OCCUPATIONS IN LABOURING AND OTHER ELEMENTAL WORK, FORESTRY AND LOGGING

7518

Examples: Log Loader, See-Cone Picker, Tree Planter, Sprayer

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
4,390	6,070	1,680	1,050	2,730

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
250	105	-	-	355

OTHER IMPORTANT REQUIREMENTS

New logging processes affect the demand for this occupational group.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	-	0.0	Under 25 years	-	-	Full-time	-	100.0
Males	-	100.0	Over 54 years	-	-	Part-time	-	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Forestry (76)
- Logging (30)
- Forestry Services (46)

Wood Industries (3)
- Sawmills, Planing Mills and Shingle Mills (3)

Gov't Service (6)
- Provincial Service (4)
- Local Gov't Service (2)

Paper and Allied Industries (2)
- Pulp and Paper Mills (2)

Experimental Farms (6)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate. The Quebec government's new forest development policy under which each tree that is cut down must be replaced by another, should boost employment for this occupational group, particularly for tree planters and seed-cone pickers. Seed-cone or pine-cone picking in seed bearer communities specially grown in forests is encouraged by the reforestation policy, because of the need to obtain good quality seed. With the increasingly widespread use of plants in containers rather than bare-root plants, land preparation work requires new skills. With the new logging processes, debranched trees can be transported just as well in the form of whole trunks as logs on trailers. Loading, whether it involves logs or whole trunks, is entirely mechanized. Loading is carried out by jammers or by self-loading trucks that in some cases require no assistance. Consequently, the demand for traditional log loaders may lose momentum, in favour of those who are able to operate loading equipment.

5. EDUCATION AND SKILLS

There is no particular educational requirement for entry to these occupations.

6. SALARY

According to the 1986 census, the average salary of workers in this occupational group who were employed full time was $18,580. Forestry workers are often paid on a lump sum basis.

ROTARY WELL DRILLING AND RELATED OCCUPATIONS 7711

Examples: Well Driller, Well Acidizer

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
90	85	-5	5	0

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
25	-	-	-	25

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	0.0	0.0	Under 25 years	16.7	-	Full-time	-	100.0
Males	100.0	100.0	Over 54 years	16.7	-	Part-time	-	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Mines, Quarries & Oil Wells (58)
- Iron Mines (6)
- Misc. Metal mines (17)
- Crude Petroleum & Nat. Gas (6)
- Misc. Non-metal Mines (6)
- Quarries (11)
- Contract Drilling for Petroleum (17)
- Misc. Mining Services (6)

Non-Metallic Min. Prod. Ind. (6)
- Stone Products (6)

Construction Ind. (12)
- Other Construction (6)
- Special-trade Contractors (6)

Electric Power, Gas and Water Util. (6)
- Gas Distribution (6)

Wholesale Trade (11)
- Petroleum Products (11)

4. LABOUR MARKET TRENDS

Forecasts indicate that employment in this occupational group will decline. Very few jobs or none at all are expected to open up over the next few years. The level of employment should remain stable, due to the modest growth anticipated in the mining sector. This occupational group is very sensitive to labour market fluctuations as well as the price of petroleum and raw materials. Entry to these occupations usually requires 5 to 10 years' general experience in related mining operation occupations. Employers require experience acquired within the company itself or in a similar mine.

5. EDUCATION AND SKILLS

Candidates must be at least 18 years of age and have ten years of schooling. A certificate of training on safety measures is preferable as well as a permit or professional competency certificate for operating the machinery. On-the-job training is necessary. For some occupations, such as oil well cementers, rotary rig operators, well acidizers, drillers, oil and gas hoist operators and derrick workers, completion of a training course at the Alberta Petroleum Industry Training Center is recommended. Completion of the secondary vocational course in mechanics is a prerequisite for derrick workers.

6. SALARY

According to the 1986 census, the average salary of rotary well drillers and related workers who were employed full time was $34,072.

ROCK AND SOIL DRILLING OCCUPATIONS 7713

Examples: Core Drill Operator, Air Drill Operator, Drifter, Well Digger

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,450	1,195	-255	135	-120

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
855	-	-	-	855

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	0.6	1.7	Under 25 years	22.6	-	Full-time	100.0	95.5
Males	99.4	98.3	Over 54 years	8.9	-	Part-time	0.0	4.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Mines, Quarries & Oil Wells (70)
- Iron Mines (1)
- Misc. Metal Mines (19)
- Misc. Non-metal Mines (2)
- Quarries (4)
- Other Contract Drilling (38)
- Misc. Mining Services (6)

Construction Ind. (22)
- Other Construction (3)
- Special-trade Contractors (19)

4. LABOUR MARKET TRENDS

Employment in this occupational group is expected to decrease. Job openings will result solely from attrition of the present labour force, but they will not be sufficient to offset the expected loss of employment. The decline of the mining markets and intensified foreign competition dim the job outlook in the mining sector where these occupations are concentrated. New mining operation methods, the refinement and implementation of new drilling equipment and the increased use of computer technology in the form of computerized mining equipment and underground terminals should favour drillers who are familiar with this technology.

5. EDUCATION AND SKILLS

There is no minimum level of education for obtaining a job in this group. Candidates must be at least 18 years of age. Rock and soil drillers are trained on the job. Many mining companies recommend that a driller work as a regular miner for at least a year so as to become familiar with mining techniques. Experience acquired within the same company or in a similar mine is preferable.

6. SALARY

According to the 1986 census, the average salary of rock and soil drillers working full time was $32,412.

BLASTING OCCUPATIONS 7715

Examples: Blaster, Dynamiter, Pit Scaler

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
275	170	-105	45	-60

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
90	-	-	-	90

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	0.0	3.1	Under 25 years	13.1	-	Full-time	97.1	100.0
Males	100.0	96.9	Over 54 years	17.8	-	Part-time	2.9	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Construction Ind. (56)
- Building Construction (3)
- Bridge Construction (3)
- Other Construction (12)
- Special-trade Contractors (38)

Mines, Quarries, Oil Wells (29)
- Iron Mines (3)
- Misc. Metal Mines (4)
- Asbestos Mines (9)
- Misc. Non-metal Mines (5)
- Quarries (8)

4. LABOUR MARKET TRENDS

Forecasts indicate that employment in this occupational group will decline. Job openings resulting from attrition of the present labour force is not expected to offset this loss. Consequently, the number of job openings on the labour market should decrease. The occupations of blaster and dynamiter are sensitive to fluctuations in the mining sector. Employers prefer candidates who have acquired experience in the company itself or in a similar type of mine. In many cases, experience in dynamiting techniques used in road construction may be an asset. Technological advances in coal mine operations, among others, has made it possible to improve performance and safety in mining work, but has reduced the number of job openings.

5. EDUCATION AND SKILLS

Formal education is not very important for these jobs, but candidates must be at least 18 years of age. On-the-job training is required. General experience in other mining occupations is an asset. Dynamiters must be familiar with the relevant safety measures when handling explosives and using the required equipment. For oil well perforators, completion of Grade 10 or the equivalent, preferably with emphasis on mechanics, is required. Completion of a training course at the Alberta Petroleum Training Center is recommended.

6. SALARY

According to the 1986 census, the average salary of blasters and dynamiters working full time was $26,958.

MOULDING, COREMAKING AND METAL CASTING OCCUPATIONS 8137

Examples: Die Casting Machine Operator, Pattern Moulder, Core Setter, Lost-Wax Caster

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,870	1,380	-490	260	-230

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
90	-	-	-	90

OTHER IMPORTANT REQUIREMENTS

This occupational group is affected by technological changes.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	3.8	3.3	Under 25 years	20.1	-	Full-time	100.0	98.7
Males	96.2	96.7	Over 54 years	12.4	-	Part-time	0.0	1.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Primary Metal Ind. (71)
- Iron and Steel Mills (13)
- Iron Foundries (25)
- Smelting and Refining (23)
- Aluminum Extruding (6)
- Copper Extruding (2)
- Metal Extruding, n.e.c. (2)

Metal Fabricating Industries (5)
- Coating (2)
- Hardware (2)
- Misc. Metal Fabricating Ind. (1)

4. LABOUR MARKET TRENDS

Forecasts indicate that employment in this occupational group will decrease. Jobs will be created mainly through attrition of the present labour force, however, these openings are not expected to offset the loss of employment. The use of automated methods and stronger materials has made it possible to manufacture more durable moulds, and this has had an adverse effect on the demand for workers in this group. As for metal fabricating, the wholesale switch from castings to sheet metal is tending to reduce demand for workers specialized in this area. Technical advances in steel casting processes and the introduction of computer-controlled electronic furnaces have also curtailed job opportunities in these occupations. Furthermore, the metal casting process has been considerably improved and is now very complex. With the lost-wax and lost-foam techniques it is now possible to produce very complex forms. Modern technology has changed the nature of metal casting through such processes as the rapid and precise construction of moulds by means of electronically controlled machines. Technological change makes it imperative for casters to learn how to regulate, operate and maintain modern equipment and to participate in the

4. LABOUR MARKET TRENDS (cont'd)

inspection process, in addition to mastering the traditional techniques. In the iron and steel industry, moulding and coremaking jobs are concentrated in the hardware, tool and cutlery subsectors, which have undergone more extensive automation on account of generally longer production runs. All this, combined with the substitution of plastics and other materials for steel, dims the employment outlook for this occupational group.

5. EDUCATION AND SKILLS

There is no specific educational requirement for entry to these occupations. However, completion of the secondary vocational course in moulding and metal casting is an asset. Casters may be promoted to the positions of supervisor, moulding inspector or team supervisor. With more advanced training and experience, the more competent moulders may attain the position of manager or laboratory technician.

6. SALARY

According to the 1986 census, the average salary of core setters and metal casters working full time was $27,739.

TOOL AND DIE MAKING OCCUPATIONS 8311

Examples: Die Maker, Tool and Die Repairer, Bench Gig Maker, Die Sinker, Tool Maker

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,845	2,090	245	475	720

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
65	70	-	-	135

OTHER IMPORTANT REQUIREMENTS

The use of numerically controlled machine tools has had an impact on this occupational group.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	3.2	1.3	Under 25 years	13.6	-	Full-time	99.5	98.2
Males	96.8	98.7	Over 54 years	21.8	-	Part-time	0.5	1.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Metal Fabricating Ind. (29)
- Fabr. Structural Metal Ind. (1)
- Architectural Metal Ind. (1)
- Metal Coating Ind. (5)
- Hardware (15)
- Machine Shops (4)
- Misc. Metal Fabr. Ind. (3)

Misc. Services (5)
- Machinery & Equip. Rental (2)
- Misc. Repair Shops (3)

Transportation Equip. Ind. (14)
- Aircraft & Aircraft Parts (11)
- Motor Vehicles (2)
- Misc. Vehicles (1)

Rubber and Plastics Prod. Ind. (4)
- Rubber Products (1)
- Plastics Products (3)

Electrical Products Ind. (8)
- Major Appliances (2)
- Electrical Industrial Equip. (1)
- Electric Wire and Cable (1)
- Misc. Electrical Products (3)

4. LABOUR MARKET TRENDS

Employment is expected to grow at about the average rate. Tool and die makers are highly skilled workers who must possess a range of skills. They manufacture and repair cutting tools, dies and casts that are used to shape metals, plastics and other materials. New technologies have an effect on the tasks of tool and die makers, but to date these changes have had only a moderate impact on employment. Automation could reduce the amount of work involved in many tasks, including layout, and transform other operations, such as internal threading, while using computers to control equipment may replace some manual work methods, particularly moulding, tracing and turning. Some tool-making tasks will become obsolete as numerically controlled machine-tools (NCMTs) are introduced which can automatically convert mechanical drawings into specifications. Still, a number of industries in Quebec are

4. LABOUR MARKET TRENDS (cont'd)

currently having difficulty recruiting tool and die makers, particularly workers skilled in appliedreading of mechanical drawings and template development. Knowledge and skills in computer-aided design and manufacturing (CAD/CAM) and in programming and operating numerically controlled machine-tools are also in demand. The knowledge and understanding required by the development of good dies remain essential assets. The use of new processes does not automatically mean the abandonment of traditional processes. With new technologies, tool and die makers must have both knowledge of and experience in older methods and equipment and knowledge of automated computer-controlled equipment. A good basic knowledge of conventional methods, complemented by experience and an interest in new techniques are major assets.

5. EDUCATION AND SKILLS

Entry to this occupation requires completion of the secondary vocational course in mechanics, machinist option, plus one year of complementary courses in the tool and die making option followed by six to twelve months' on-the-job training. It is possible to enter these occupations by training as a machinist and then acquiring a great deal of machine adjusting experience, as well as through skill upgrading courses.

6. SALARY

According to the 1986 census, the average salary of tool and die makers working full time was $26,800.

MACHINISTS AND MACHINE TOOL SETTING-UP OCCUPATIONS 8313

Examples: Machine Adjuster, Aircraft Machinist, Lathe Hand, Numerical Control Machine Operator, Machine-Tool Setter, Milling Machine Set-Up Operator, Machinist

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
16,250	19,795	3,545	2,785	6,330

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
900	2,730	630	185	4,445

OTHER IMPORTANT REQUIREMENTS

This occupational group is affected by new technologies.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	1.8	2.2	Under 25 years	28.8	-	Full-time	98.4	98.5
Males	98.2	97.8	Over 54 years	10.7	-	Part-time	1.6	1.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Metal Fabricating Ind. (22)
- Metal Coating (2)
- Metal Wire (1)
- Hardware (3)
- Machine Shops (14)
- Misc. Metal Fabricating Ind. (2)

Machinery Industries (11)
- Misc. Machinery & Equip. (11)

Transportation Equipment Ind. (9)
- Aircraft and Aircraft Parts (9)

Transportation (6)
- Railway Transport (6)

Paper and Allied Industries (3)
- Pulp and Paper Mills (30)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a rate slightly above the average. The introduction of new technologies greatly affects the tasks of these workers. The introduction of computer-controlled production processes, mechanical and electronic automation and robotization could increase demand for machinists and machine-tool setters familiar with computerized and/or programmed equipment and its maintenance. Tool adjustment tasks are often carried out by numerically controlled machine-tools (NCMT), leading to a reduction of certain specialized production jobs to the advantage of new control and monitoring jobs often requiring greater versatility. The computerization of machine-tools means that such operation as the cutting, milling and sharpening of metal parts can be done automatically. The introduction of numerically controlled machines requires increasingly qualified personnel capable of making the necessary adjustments during the production process and has had a positive impact on the group of machinists.

4. LABOUR MARKET TRENDS (cont'd)

New skills are required; for example, in order to use direct numeric control (DCN) lathes, lathe operators must be specialized in numeric control (NC) for each lathe. Skills in blueprint reading, programming, numeric control and computerization are in demand.

5. EDUCATION AND SKILLS

Entry to these occupations requires a secondary vocational course in mechanics, machinist I or II, NCMT operator or precision instrument mechanic option, or complementary tool-maker option, depending on specialization. For adjusters, a secondary vocational course in machining techniques is required. Generally, extensive training and experience in using "older" methods and equipment as well as automated computer-controlled equipment increase job prospects. Knowledge of the metric system is essential.

6. SALARY

According to the 1986 census, the average salary of machinists and machine adjusters working full time was $24,307.

MACHINE-TOOL OPERATING OCCUPATIONS 8315

Examples: Production Machine-Tool Operator, Automatic-Lathe Operator, File Cutter, Production Milling-Machine Operator

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,370	1,760	-610	310	-300

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
115	105	-	-	220

OTHER IMPORTANT REQUIREMENTS

Knowledge of numeric control machine-tools is an asset.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	-	7.8	Under 25 years	-	-	Full-time	-	99.3
Males	-	92.2	Over 54 years	-	-	Part-time	-	0.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation Equip. Ind. (84)
- Motor Vehicles (60)
- Truck Body and Trailers (13)
- Motor Vehicle Parts and Access. (8)
- Railroad Rolling Stock (2)
- Misc. Vehicles (1)

Wholesale Trade (21)
- Motor Vehicles & Access. (21)

Rubber and Plastics Prod. Ind. (3)
- Rubber Prod. (1)
- Plastics Prod., n.e.c. (2)

4. LABOUR MARKET TRENDS

This occupational group is expected to lose jobs, and openings will result mainly from attrition of the present labour force. The introduction of new technologies has had an effect on the tasks of these workers and their number. Numeric control machine-tool technology (NCMT) has had the most impact. The computerization of machine-tools means that the cutting, milling and grinding of parts are done automatically. With conventional machine-tools, the operator made parts according to a plan and had to have a knowledge of the tools and cutting conditions. Operators turned the machine at the speed they had mastered, and guided the machine's movements manually. With NCMT, the plan is programmed by a special department, the machining process is decided on and the machine's movements are predetermined. NCMT carries out the work. The operator's tasks are increasingly becoming machine- control and monitoring tasks. Tasks related to the manual operation of machines and tools are disappearing. However, the operator must know the codes and languages that control the machine's operation.

4. LABOUR MARKET TRENDS (cont'd)

NCMT can be used by different occupational groups, a situation that is detrimental to operators but to the advantage of machinists and machines adjusters.

5. EDUCATION AND SKILLS

There is no specific educational requirement for entry to this occupational group. However, a secondary school diploma is an asset. For tool grinders, a secondary vocational course in tool grinding is preferable.

6. SALARY

According to the 1986 census, the average salary of machine-tool operators working full time was $22,896.

INSPECTING, TESTING, GRADING AND SAMPLING OCCUPATIONS: METAL MACHINING

8316

Examples: Differential Tester, Tool Inspector, Gear Inspector

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
370	455	85	135	220

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
10	80	45	-	135

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	9.7	11.1	Under 25 years	17.7	-	Full-time	96.8	100.0
Males	90.3	88.9	Over 54 years	21.0	-	Part-time	3.2	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Metal Fabricating Ind. (36)
- Fabricated Structural Metal (3)
- Metal Coating (8)
- Wire and Wire Products (5)
- Hardware (11)
- Machine Shops (6)
- Misc. Metal Fabricating Ind. (3)

Primary Metal Ind. (8)
- Aluminum Extruding (3)
- Copper Extruding (3)
- Metal Extruding, n.e.c. (2)

Transportation Equip. Ind. (20)
- Aircraft & Aircraft Parts (10)
- Motor Vehicles (2)
- Motor Vehicle Parts & Access.(3)
- Railroad Rolling Stock (3)
- Misc. Vehicle Man. (2)

Construction Industry (5)
- Other Construction (3)
- Special-trade Contractors (2)

Wholesale Trade (10)
- Motor Vehicles (2)
- Hardware (3)
- Metal & Metal Prod., n.e.c. (3)
- Wholesalers, n.e.c. (2)

4. LABOUR MARKET TRENDS

Employment in these occupations is expected to grow at an above-average rate. With the increasingly widespread use of computer-aided control and automated detection, measurement and diagnostic devices, the range of tasks carried out by inspectors is gradually decreasing. Job opportunities for this occupational group could become even more limited. Some industries in the metal sector are restructuring testing responsibilities, so that the workers themselves carry out the various inspection and testing tasks. The repercussions of this reorganization of testers' work could in the more or less long term have a negative impact and bring about a major decrease in the demand for these workers. Moreover, in machine shops it is very often the same people who carry out

4. LABOUR MARKET TRENDS (cont'd)

inspection and packaging. Tests and inspections requiring the use of sophisticated techniques and equipment are often done by technicians, designers or even engineers rather than testers.

5. EDUCATION AND SKILLS

There is no specific educational requirement for these occupations. Employees generally obtain positions through promotion within the company, after having acquired a good knowledge of the machined and manufactured products.

6. SALARY

According to the 1986 census, the average salary of machine shop inspectors, testers and graders working full time was $27,089.

METAL MACHINING OCCUPATIONS, NOT ELSEWHERE CLASSIFIED 8319

Examples: Cutter, Keysmith, Sawsmith, Babitter, Lapper Hand, Hand Filer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
735	765	30	130	160

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
110	70	-	-	180

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	3.6	6.3	Under 25 years	28.9	-	Full-time	98.3	97.2
Males	96.4	93.7	Over 54 years	10.9	-	Part-time	1.7	2.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Metal Fabricating Ind. (46)
- Boiler and Plate Works (2)
- Fabr. Structural Metal (5)
- Fabr. Architectural Metal (7)
- Metal Coating (5)
- Wire and Wire Prod. (2)
- Hardware (7)
- Machine Shops (15)
- Misc. Metal Fabr. Ind. (3)

Primary Metal Ind. (19)
- Iron and Steel Mills (10)
- Smelting and Refining (7)
- Aluminum Extruding (2)

Wholesale Trade (9)
- Metal and Metal Prod. (6)
- Scrap and Waste Materials (3)

4. LABOUR MARKET TRENDS

Employment in these occupations is expected to remain fairly stable. The introduction of new technologies in the metal products and machinery sectors has had an impact on the growth of this occupational group. The use of sheet metal has changed metal machining tasks, and tends to increase machining operations rather than reduce them. The introduction of numeric control machine-tools has eliminated intermediate qualifications, to the advantage of machinists and the detriment of operators.

5. EDUCATION AND SKILLS

There is no particular educational requirement for entry to this occupational group. For saw grinders/repairers, a secondary school diploma in tool grinding and sharpening is an asset.

6. SALARY

According to the 1986 census, the average salary of metal machinists, not elsewhere classified, working full time was $22,201.

SHEET METAL WORKERS 8333

Examples: Sheet Metal Worker, Tinker, Tinsmith, Metal Worker

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
5,480	5,605	125	810	935

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
835	970	-	230	2 035

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	3.2	2.5	Under 25 years	23.2	-	Full-time	97.9	98.4
Males	96.8	97.5	Over 54 years	8.7	-	Part-time	2.1	1.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Construction Industry (43)
- Building Contractors (2)
- Special-trade Contractors (41)

Metal Fabricating Ind. (18)
- Fabr. Structural Metal Ind. (2)
- Architectural Metal Ind. (3)
- Metal Coating Ind. (9)
- Wire and Wire Products Man. (1)
- Misc. Metal Fabr. Ind. (3)

Transportation Equip. Ind. (5)
- Aircraft and Aircraft Parts (3)
- Shipbuilding and Repair (2)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a below-average rate. Most job openings will result from attrition of the present labour force. Employment for this group is sensitive to market fluctuations, particularly in the construction and metal machining sectors. In the short term, job openings may remain few. However, toward the end of the forecast period, the number of jobs in the construction sector are expected to increase and thus stimulate employment growth for sheet metal workers on construction sites. The increased use of sheet metal has a positive impact on employment for these workers. In the construction sector, there are few technological changes that will affect this group. Skill in blueprint reading is sought by employers. In the aircraft maintenance industry there is a constant need for sheet metal workers. In the short and medium term, the demand for sheet metal workers will continue to grow. A number of factors affecting the demand for aircraft maintenance services, such as increased safety regulations, the aging of aircraft and technological changes, also have repercussions on the demand for sheet metal workers in the air transport industry. Increased demand for sheet metal workers will be brought about mainly by the aging of existing aircraft.

4. LABOUR MARKET TRENDS (cont'd)

Replacement of metals with composite materials will constitute the main change in aircraft structure. The nature of the work will change owing to the increased use of non-metallic materials such as ceramics and composite materials. A good basic knowledge of sheet metal and composite materials is an asset for these workers. The ability to read technical manuals and interpret blueprints and drawings as well as mathematical skills for preparing patterns are in demand. The ability to continually upgrade skills in order to keep abreast of technological changes is essential. The ability to work in a team is becoming increasingly important since maintenance work is done by teams of specialized workers.

5. EDUCATION AND SKILLS

There is no specific requirement for entering this occupational group. However, a secondary vocational course in sheet metal mechanics is an asset. Candidates must be registered with the Commission de la construction du Québec to be able to work in construction. A community college diploma is necessary to be able to work in the aircraft repair and maintenance sector. Training in composite materials is given at both the secondary and college levels.

6. SALARY

According to the 1986 census, the average salary of sheet metal workers who were employed full time was $25,227.

WELDING AND FLAME CUTTING OCCUPATIONS 8335

Examples: Gas Brazer, Acetylene Cutter, Solderer-Dipper, Cutting Torch Operator, Laser Welding Technician, Lead Welder, Arc Welder, Welder-Fitter

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
22,815	22,125	-690	2,620	1,930

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
3,240	3,040	-	-	6,280

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	2.9	3.1	Under 25 years	26.5	-	Full-time	98.5	97.7
Males	97.1	96.9	Over 54 years	7.3	-	Part-time	11.5	2.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Metal Fabricating Ind. (15)
- Boiler and Plate Works (2)
- Fabr. Structural Metal Ind. (4)
- Architectural Metal Ind. (3)
- Metal Coating Ind. (2)
- Machine Shops (2)
- Misc. Metal Fabr. Ind. (2)

Misc. Services (12)
- Welding Shops (12)

Construction Industry (10)
- Building Construction (1)
- Other Construction (2)
- Special-trade Contractors (7)

Machinery Industries (9)
- Agricultural Implement Ind. (1)
- Misc. Machinery Man. (8)

Transportation Equip. Ind. (9)
- Truck Body Man. (3)
- Railroad Rolling Stock Ind. (1)
- Misc. Vehicle Man. (1)
- Shipbuilding and Repair (4)

Primary Metal Industry (5)
- Iron and Steel Mills (2)
- Smelting and Refining (2)
- Metal Extruding, n.e.c. (1)

4. LABOUR MARKET TRENDS

Forecasts indicate that employment in this occupational group will decrease. Job openings will result mainly from attrition of the present labour force. Supply is expected to exceed demand. Technical progress is likely to check employment growth in this group. Increased automation and robotization of welding tasks in manufacturing plants should reduce the number of welding machine operators. The growing number of programmable cutting machines will limit job opportunities for flame cutters who work by hand. Technical innovations are expected to have a more negative impact on less qualified welders, while the employment outlook for highly qualified manual welders should remain bright. For example, automatic welding machines require high-pressure welders rather than regular welders, as is the case for traditional arc welding machines. Even if automatic welding machines can replace 2

4. LABOUR MARKET TRENDS (cont'd)

to 3 regular welding machines and reduce the number of welders needed, the qualifications required for its operation are higher. For welders-fitters and pressure-vessel welders, skill in reading plans and computer-aided manufacturing are in demand.

5. EDUCATION AND SKILLS

Entry to these occupations requires a secondary vocational course in hydrothermics, welder option. There are many kinds of welding, with differing skill requirements depending on the welding technique, type of metal and thickness of material. These range from spot welding requiring very little skill to plasma welding demanding considerable training. These training requirements vary from ferrous to non-ferrous metals. Employers may require a number of construction-related skills as well as pipe-fitting skills. Candidates wishing to work in construction must have a professional competency certificate issued by the Commission de la construction du Québec. In general, welders must be familiar with several welding techniques even if they use only one or two.

6. SALARY

According to the 1986 census, the average salary of welders and flame cutters working full time was $23,880.

INSPECTING, TESTING, GRADING AND SAMPLING OCCUPATIONS: METAL SHAPING AND FORMING, EXCEPT MACHINING

8336

Examples: Chain Inspector, Spring Tester, Can Inspector

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
460	515	55	120	175

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
55	-	-	-	55

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	9.0	8.9	Under 25 years	22.5	-	Full-time	97.1	100.0
Males	91.0	91.1	Over 54 years	16.2	-	Part-time	2.9	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Metal Fabricating Ind. (30)
- Boiler and Plate Works (5)
- Fabr. Structural Metal (4)
- Architectural Metal Ind. (1)
- Metal Coating Ind. (6)
- Wire and Wire Prod. Man. (10)
- Hardware Man. (1)
- Heating Equipment Man. (1)
- Machine Shops (1)
- Misc. Metal Fabr. Ind. (1)

Business Services (4)
- Eng. and Scientific Serv. (3)
- Misc. Business Serv. (1)

Transportation Equip. Ind. (18)
- Aircraft & Aircraft Parts (4)
- Motor Vehicles (4)
- Motor Vehicle Parts (6)
- Railroad Rolling Stock (1)
- Shipbuilding and Repair (3)

Paper and Allied Industries (2)
- Pulp and Paper Mills (1)
- Misc. Paper Converters (1)

Primary Metal Ind. (13)
- Iron and Steel Mills (6)
- Steel Pipe and Tube Mills (1)
- Smelting and Refining (3)
- Metal Extruding, n.e.c. (3)

4. LABOUR MARKET TRENDS

Below-average employment growth is forecast. The trend toward integrating quality control and production could limit the demand for inspectors. Each type of forming process requires experienced inspectors with pertinent and varied knowledge. The complexity of the work varies according to the type of inspection that must be carried out. Thus, in addition to sight inspection, welding testers must know how to use precision measurement instruments, penetrant fluorescents, X-ray devices and supersonic and magnetic wave testing devices. For welding inspectors, knowledge of different welding tools and techniques as well as the properties of the metals to be assembled and

4. LABOUR MARKET TRENDS (cont')

cut is essential. At the other extreme, testers of trims on the cut edge of metal parts do not really need advanced training. In general, knowledge of manufacturing processes and direct experience as a worker in manufacturing or processing, or as an assistant, is necessary.

5. EDUCATION AND SKILLS

The educational requirement for this group varies. For advanced testing tasks, specialized training is necessary, while for lower level testing tasks ten years of schooling is sufficient. Inspectors' jobs are usually obtained through promotion within the company, after the employee has acquired good experience and knowledge of the products being manufactured and the techniques used.

6. SALARY

According to the 1986 census, the average salary of inspectors, testers and graders in metal shaping and forming occupations, except machining, working full time was $27,370.

BOILERMAKERS, PLATERS AND STRUCTURAL METAL WORKERS 8337

Examples: Boilermaker, Boiler Repairer, Boilerhouse Repairer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
875	1,055	180	130	310

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
250	25	-	-	275

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	1.0	1.3	Under 25 years	12.7	-	Full-time	97.6	100.0
Males	99.0	98.7	Over 54 years	9.5	-	Part-time	2.4	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Metal Fabricating Ind. (27)
- Boiler and Plate Works (14)
- Fabr. Structural Metal Ind. (9)
- Architectural Met. Ind. (1)
- Heating Equip. Man. (2)
- Machine Shops

Transportation Equip. Ind. (9)
- Aircraft & Aircraft Parts (1)
- Shipbuilding and Repair (8)

Construction Industry (27)
- Building Construction (1)
- Other Construction (3)
- Special-trade Contractors (23)

Primary Metal Industries (2)
- Steel Pipe and Tube Mills (1)
- Smelting and Refining (1)

Transportation (11)
- Railway Transport (11)

4. LABOUR MARKET TRENDS

Employment is expected to grow at about the average rate. Supply should meet demand. Since boilermakers must also repair and renovate existing equipment, they are less affected by cyclical swings in employment than other workers.

5. EDUCATION AND SKILLS

Candidates may enter these occupations through an apprenticeship. There is no basic educational requirement, but a secondary vocational diploma in hydrothermics, sheet metal mechanics option, is an asset.

6. SALARY

According to the 1986 census, the average salary of boilermakers, platers and structural metal workers who were employed full time was $26,981.

MOTOR VEHICLE FABRICATING AND ASSEMBLING OCCUPATIONS, N.E.C. 8513

Examples: Body Assembler, Engine Installer, Door Adjuster, Axle Assembler, Battery Repairer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
4,830	8,250	3,420	610	4,030

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
215	80	-	-	295

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	4.9	7.2	Under 25 years	17.0	-	Full-time	97.4	97.8
Males	95.1	92.8	Over 54 years	4.4	-	Part-time	2.6	2.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation Equip. Ind. (85)
- Motor Vehicle Man. (61)
- Truck Body Man. (13)
- Motor Vehicle Parts & Acc. Man. (8)
- Railroad Rolling Stock Ind. (2)
- Misc. Vehicle Man. (1)

Rubber & Plastics Prod. Ind. (3)
- Rubber Prod. (1)
- Plastics Prod. (2)

Wholesale Trade (3)
- Motor Vehicles (3)

4. LABOUR MARKET TRENDS

Employment growth is expected to be higher than average. Job opportunities for this group depend on conditions in the transportation equipment sector, particularly the motor vehicle, trailer and motor vehicle parts manufacturing sector. Though the outlook forecast for the entire transportation equipment industry is bright, employment growth in the motor vehicle sector is likely to be small, but nonetheless significant. At present, Quebec plants are enjoying an increase in production capacity and are boosting employment throughout the industry. Such new technologies as statistical process control (SPC), just-in-time production and delivery, numeric control machine-tools (NCMT) and computerized numeric command machine-tools as well as changes in the way the work is organized are changing the skills required of these workers. The trend toward teamwork noted in the automobile industry requires workers to have skills in communication and working in a group. These skills are becoming major assets for candidates of these occupations. It appears that changes in production methods, quality control and human resources management are tending to increase the qualifications required in terms of analytical,

4. LABOUR MARKET TRENDS (cont'd)

interpersonal and technical skills. Employment is expected to decline for such non-specialized workers as assemblers over the next few years.

5. EDUCATION AND SKILLS

Entry to these occupations generally requires completion of secondary school. On-the-job training is necessary.

6. SALARY

According to the 1986 census, the average salary of workers specialized in motor vehicle fabricating and assembling occupations, not elsewhere classified, who were employed full time was $27,182.

AIRCRAFT FABRICATING AND ASSEMBLING OCCUPATIONS, N.E.C. 8515

Examples: Aircraft Rigger, Plumbing and Hydraulics Aircraft Installer, Metal-Bonding Equipment Operator, Tape-Controlled-Rivetting Machine Assembler

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,160	2,665	505	430	935

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
50	140	595	-	785

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	-	11.1	Under 25 years	-	-	Full-time	-	95.9
Males	-	88.9	Over 54 years	-	-	Part-time	-	4.1

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation Equip. Ind. (83)
- Aircraft & Aircraft Parts (83)

Transportation (6)
- Air Transport (4)
- Services Inc. to Air Transp. (2)

Electrical Prod. Ind. (2)
- Communications Equip. Man. (2)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a rate slightly above the average. Aircraft assemblers work for the most part in the aircraft and aircraft parts manufacturing sector and are therefore dependent on the growth of the industry. The reconditioning of aging aircraft in the present fleet and the constraints posed by the regulations, particularly with respect to safety, should increase the demand for structural aircraft work and thus improve job prospects for aircraft fabricating and assembling occupations. Changes include replacing old electric and mechanical instruments with electronic components. The increased use of new materials, such as plastics, resins and composite materials, is having an impact on the tasks of aircraft assemblers. These workers will have to learn to process a wider range of materials.

5. EDUCATION AND SKILLS

Entry to these occupations requires at least a secondary school diploma. For aircraft structures and surfaces assemblers, metal-bonding equipment operators, and airframe assemblers, a secondary vocational course in aeronautic sheet metal mechanics is preferable. Candidates must undergo on-the-job training dealing specifically with the manufacture and repair of aircraft or aeronautical technology. For some positions, additional training at the college level may be recommended.

6. SALARY

According to the 1986 census, the average salary of aircraft manufacturers and assemblers, not elsewhere classified, working full time was $26,268.

ELECTRICAL AND RELATED EQUIPMENT INSTALLING AND REPAIRING OCCUPATIONS, N.E.C. 8533

Examples: Aircraft Electrician, Automobile Electrician, Neon Sign Installer, Household Appliance Installer, Battery Repairer, Refrigeration Worker, Refrigeration Mechanic

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
13,315	15,320	2,005	1,960	3 965

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
1,040	545	-	-	1,585

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	2.0	1.6	Under 25 years	20.2	-	Full-time	98.4	98.4
Males	98.0	98.4	Over 54 years	8.6	-	Part-time	1.6	1.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Retail Trade (13)
- General Marchandise Store (1)
- Automobile Repair Shops (1)
- Furniture Stores (2)
- Radio, Television Repair Shops (8)
- Retaillers, n.e.c. (2)

Primary Metal Industry (3)
- Iron and Steel Mills (1)
- Smalting and Refining (2)

Transp., Comm. & Other Utilities (11)
- Railway Transport (6)
- Urban Transit Systems (2)
- Electric Power (3)

Wholesale Trade (4)
- Electrical Machinery (2)
- Wholesalers, n.c.e. (2)

4. LABOUR MARKET TRENDS

Employment is expected to grow at about the average rate. New technologies have led to a greater need for maintenance and repair of computerized or programmed equipment, and this should benefit electrical appliance repairers. In addition to the traditional tasks performed by workers in these occupations, there are tasks related to modern electronic control networks, which include semiconductor controls, programmable control devices and automated networks. Knowledge ans skills in these new fields are in great demand. Training in using such

ELECTRICAL AND RELATED EQUIPMENT INSTALLING AND REPAIRING OCCUPATIONS, N.E.C. 8533

4. LABOUR MARKET TRENDS (cont'd)

programmable robots and numerically controlled systems is an asset. Demand for refrigeration mechacics is expected to remain steady. Over the past few years, the use of computers to control heating and air conditioning in buildings has increased. Consequently, demand for installers and repairers skilled in these systems is expected to rise. For household appliance repairers, the range of products to be repaired has widened, but the use of electronic parts makes it less likely that appliances will need repairs as often. There is a marked trend, however, toward having expensive household appliances repaired rather than replaced. Continuous cleaning ovens are no longer on the market, but repairers of major appliances may be called upon to repair these that are already installed. Microwave oven repairs are carried out by electronic technicians.

5. EDUCATION AND SKILLS

Entry to the occupation of refrigeration mechanic does not have any basic requirement, but a secondary long vocational course in HVAC, refrigeration worker option, is an asset. Depending on the job, a secondary long vocational course in electrotechnology, with an option in household appliance mechanics, installation and repair of telecommunications equipment or household electronic appliance servicing, may be required. A community college diploma in electronics with a concentration in electronics or visual equipment could be an asset.

6. SALARY

According to the 1986 census, the average salary of installers and repairers of electric and related equipment, not elsewhere classified, working full time was $27,512.

ELECTRONIC AND RELATED EQUIPMENT INSTALLING AND REPAIRING OCCUPATIONS, N.E.C.

8535

Examples: Radar Technician, Television Studio Equipment Repairer, Communications Technician, Electronic Technician, Speaker Installer, Communications Equipment Electrician, Radio and Television Technician

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
6,700	9,280	2,580	875	3,455

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
200	1,560	4,325	-	6,085

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	4.6	4.1	Under 25 years	23.2	-	Full-time	-	96.5
Males	95.4	95.9	Over 54 years	6.1	-	Part-time	-	3.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Communications (30)
- Radio & Television Broad. (12)
- Telephone Systems (7)
- Telegraph and Cable Systems (1)

Retail Service (13)
- Furniture Stores (5)
- Radio, Television Repair Shops (8)

Electrical Prod. Ind. (10)
- Communications Equip. (10)

Wholesale Trade (7)
- Electrical Machinery (5)
- Wholesalers, n.e.c. (2)

Business Services (5)
- Computer Services (4)

Construction Ind. (4)
- Special-trade Contractors (4)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate. The increased use of computers in the manufacturing and industrial sectors will ensure good employment growth. Telecommunications and data transmission are perhaps the fields that have been affected most by rapid changes in equipment and technology. Because of the high cost of telecommunications systems, equipment age varies greatly, and maintenance on a number of generations of equipment must be carried out. With regard to video game equipment, transmitting equipment, audio equipment, television receivers and monitors and speakers, the constant improvement in the reliability and performance of semiconductor equipment will reduce the need for maintenance and repair. However, this trend will be partially offset by the increased technical complexity of the equipment and the greater number of options. Higher sales and lower costs

4. LABOUR MARKET TRENDS (cont'd)

of electronic music equipment, variety, the growing number and technical complexity of high-fidelity stereo systems, car radios and VCRs should stimulate demand in these occupations. There is a trend toward specializing in a limited number of types and makes.

5. EDUCATION AND SKILLS

Entry to these occupations usually requires a secondary vocational course in electrotechnology, installer and repairer of telecommunications equipment option. A community college diploma in electrotechnology with a concentration in electronics or audio-visual equipment is an asset. For some occupations it is a basic requirement. The development of existing equipment and the introduction of new equipment require people working in these occupations to continually upgrade their knowledge.

6. SALARY

According to the 1986 census, the average salary of installers and repairers of electronic and related equipment, not elsewhere classified, working full time was $29,471.

INSPECTING, TESTING, GRADING AND SAMPLING OCCUPATIONS: FABRICATING, ASSEMBLING, INSTALLING AND REPAIRING ELECTRICAL, ELECTRONIC AND RELATED EQUIPMENT

8536

Examples: Motor Tester, Electronic System Tester, Electronic Components Inspector

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,600	2,720	120	515	635

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
95	-	-	-	95

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	31.9	33.6	Under 25 years	23.4	-	Full-time	98.0	100.0
Males	68.1	66.4	Over 54 years	8.8	-	Part-time	2.0	0.0

3. LABOUR MARKET TRENDS (1986 %)

Electrical Prod. Industry (56)
- Small Electrical Appliances (2)
- Major Appliances (6)
- Lighting Fixtures (1)
- Communications Equip. (28)
- Electrical Industrial Equip. (6)
- Electric Wire and Cable (3)
- Misc. Electrical Prod. (10)

Machinery Industry (16)
- Office and Store Machinery (16)

Wholesale Trade (4)
- Electrical Machinery (4)

4. LABOUR MARKET TRENDS

Employment for this occupational group is expected to remain relatively stable. Most of the jobs that will open up on the market will result from attrition of the present labour force. The use of lasers to detect defects and the possibility of robotic vision may limit future job growth to some extent. The use of specialized equipment for inspection tasks may limit the need for these workers.

INSPECTING, TESTING, GRADING AND SAMPLING OCCUPATIONS: FABRICATING, ASSEMBLING, INSTALLING AND REPAIRING ELECTRICAL, ELECTRONIC AND RELATED EQUIPMENT

8536

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5. EDUCATION AND SKILLS

Entry to these occupations requires at least a secondary vocational diploma, preferably with a specialization in electromechanics of automated systems. A community college diploma in electronics is recommended. Basic knowledge of electronic and electrical equipment is essential. Candidates may attain the position of inspector only after several years of related experience.

6. SALARY

According to the 1986 census, testers and graders in the manufacture, assembly, installation and repair of electrical, electronic and related equipment working full time was $24,809.

RADIO AND TELEVISION SERVICE REPAIRERS 8537

Examples: Television Mechanic, Amplifier Repairer, Electronic Technician in the Furniture Industry, Radio Mechanic

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,090	645	-445	115	-330

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
275	-	-	-	275

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	1.1	3.4	Under 25 years	24.3	-	Full-time	95.1	94.6
Males	98.9	96.6	Over 54 years	11.4	-	Part-time	4.9	5.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Retail Trade (65)
- General Merchandise Stores (4)
- Furniture Stores (13)
- Radio, Television Repair Shops (47)
- Retailers, n.e.c. (1)

Communications (3)
- Radio and Television Broadcasting (3)

Wholesale Trade (9)
- Machinery (6)
- Wholesalers, n.e.c. (3)

Electrical Products Industry (5)
- Major Appliances (1)
- Televisions (1)
- Communications Equip. (3)

4. LABOUR MARKET TRENDS

Employment in these occupations is expected to decline dramatically. Job openings will be created solely through attrition of the present labour force. The increased durability and falling prices of audio and video equipment have limited somewhat the job openings for repairers working in repair shops, despite the surge in demand for such equipment. The transition from analogue electronics to digital electronics has given rise to new product design and the development of new products. Measurement and control instruments differ according to the technology. Optical signal generators and multimeters employ analogue technology, and surge or function generators, meters, logic monitors and multitrack oscilloscopes employ digital technology. Knowledge of these two types of tools is an asset for service repairers since many products now combine both technologies. However, digital technology eliminates numerous manual adjustments. The distribution of such new digital products as compact disc players, video games, etc., could have an adverse effect on employment in the short and medium term, due to the increased

4. LABOUR MARKET TRENDS (cont'd)

reliability of this equipment. The development of integrated circuits and modularization are changing the tasks of service repairers. Diagnosis services are losing ground, while the distribution of disposable modules are taking up a greater portion of their tasks.

5. EDUCATION AND SKILLS

Entry to this occupational group requires a secondary vocational course in electrotechnology, household electronic appliance servicer option. A college-level course in electronics is an asset. On-the-job training is usually required.

6. SALARY

According to the 1986 census, the average salary of radio and television service repairers working full time was $21,927.

CABINET AND WOOD FURNITURE MAKERS 8541

Examples: Furniture Cabinetmaker, Layout Marker, Hand Sander, Mirror Framer

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
11,445	12,080	635	2,040	2,675

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
1,585	425	-	-	2,010

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	5.0	4.7	Under 25 years	30.3	-	Full-time	95.3	95.1
Males	95.0	95.3	Over 54 years	11.1	-	Part-time	4.7	4.9

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Furniture Industry (52)
- Household Furniture (43)
- Office Furniture (3)
- Misc. Furniture (6)

Retail Trade (3)
- Furniture Stores (1)
- Retailers, n.e.c. (2)

Wood Industries (24)
- Sash, Door Plants (23)
- Coffin, Casket Ind. (1)

Construction Industry (6)
- Building Construction (2)
- Special-trade Contractors (4)

4. LABOUR MARKET TRENDS

Below-average employment growth is forecast. Job openings will be created through attrition of the present labour force. More than half of these workers are employed in the furniture industry, and more specifically in the household furniture industry. Such negative factors as the low rate of new households being formed, the low level of activity in the residential construction sector, high mortgage rates and foreign competition, may slow down furniture industry growth, thus reducing the demand for cabinet and wood furniture makers.

These occupations remain basically manual. The most commonly used of the new technologies are feeder robots, multi-belt sanders and machines used to make the sides of drawers. These innovations should not affect the volume of employment for cabinetmakers, nor their main tasks. Little change in tasks and qualifications is expected as a result of new technologies.

5. EDUCATION AND SKILLS

There are a number of means of entry to these occupations. One requires a secondary vocational course in furniture and construction and two to four years' on-the-job training under the supervision of an experienced cabinetmaker. Another requires a secondary vocational course and a one- to two-year program in furniture and wood technology at the Victoriaville CEGEP. A community college diploma is an asset.

6. SALARY

According to the 1986 census, the average salary of cabinet and wood furniture makers working full time was $17,788.

PATTERNMAKING, MARKING AND CUTTING OCCUPATIONS: TEXTILE, FUR AND LEATHER PRODUCTS 8551

Examples: Patternmaker, Cutting-Machine Operator, Leather Cutter, Hand Leather Cutter, Canvas Cutter, Garment Cutter, Pattern Cutter, Marker, Fur Cutter

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1. LABOUR MARKET TRENDS FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
4,410	3,745	-665	1,035	370

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
650	-	155	-	805

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	24.3	27.4	Under 25 years	-	-	Full-time	-	96.1
Males	75.7	72.6	Over 54 years	-	-	Part-time	-	3.9

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Clothing Industries (55)
- Men's Clothing (11)
- Women's Clothing (2)
- Children's Clothing (5)
- Fur Goods (6)
- Misc. Clothing Ind. (12)

Leather Industries (17)
- Leather Tanneries (1)
- Shoe Factories (11)
- Luggage, Handbags (5)

Wholesale Trade (3)
- Apparel and Dry Goods (3)

Furniture Stores (2)
- Household Furniture (2)

Retail Industry (1)
- Clothing Stores (1)

4. LABOUR MARKET TRENDS

These occupations are expected to lose jobs. Job openings will be created through attrition of the present labour force and are not expected to offset the anticipated loss of employment. The outlook in these occupations is linked to the garment and textile sector, which does not appear to be very bright. Foreign competition tends to decrease the market share of local producers who try to remain competitive by reducing their labour costs. The modernization of equipment with a view to increasing productivity may cause job opportunities to decline.

4. LABOUR MARKET TRENDS (cont'd)

Technological changes in the garment industry have an impact on the number and tasks of patternmakers and cutters. Using a computer-made design, the patternmaker prepares a life-size pattern and makes the necessary corrections. Variations of a basic pattern are made on a graphics screen, and the gradation of pattern sizes is done by means of specialized software. All the patterns in all the sizes are stored on computer. Knowledge of this software is an asset for patternmakers. In the long term, new technologies will make it possible to prepare three-dimensional designs and develop a basic life-size pattern from the computer. The implementation of such technology would have an adverse effect on the number of job prospects for patternmakers.

New techniques now make it possible to do marking automatically on a computer-controlled marking table. In time, marking will no longer be required since fabric cutting will be carried out by computer without a marked outline. Although they are not yet widespread, these new techniques may have a negative impact on the demand for markers.

The use of new cutting techniques, such as steel-rule dies, band saws, electric vertical blade knives with computer-aided cutting devices and laser cutting equipment, should not have an impact on the number of cutters since this new equipment cannot be used with all fabrics or styles. However, knowledge of electronic cutting systems is an asset for cutters.

Cutters in the leather industry are now using laser technology for cutting shoe patterns out of cardboard. This new technology is changing the qualifications required of cutters and is likely to have an adverse effect on the demand for cutters in this industry.

5. EDUCATION AND SKILLS

In general, entry to these occupations requires completion of secondary school. For pattern graders, markers and cutters, a secondary vocational diploma, pattern design option, is necessary. For garment patternmakers, a community college diploma in men's or women's fashion design technology is an asset.

6. SALARY

According to the 1986 census, the average salary of patternmakers, markers and cutters of fabric, fur and leather, working full time was $18,293.

TAILORS AND DRESSMAKERS 8553

Examples: Costumer, Dressmaker, Ready-to-Wear Garments Tailor, Made-to-Measure Garments Tailor

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
23,340	22,105	-1,235	7,645	6,410

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
1,175	1,785	155	-	3,115

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	59.8	89.9	Under 25 years	-	-	Full-time	-	92.3
Males	40.2	10.1	Over 54 years	-	-	Part-time	-	7.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Clothing Industries (62)
- Men's Clothing (18)
- Women's Clothing (24)
- Children's Clothing (4)
- Foundation Garment Ind. (2)
- Misc. Clothing Ind. (14)

Retail Services (6)
- Men's Clothing Stores (3)
- Women's Clothing Stores (2)
- Clothing Stores, n.e.c. (1)

Personal Services (8)
- Dry Cleaners (1)
- Misc. Personal Services (7)

Leather Industries (2)
- Shoe Factories (2)

Textile Industry (6)
- Misc. Textile Industries (3)
- Knitting Mills (3)

4. LABOUR MARKET TRENDS

Employment in these occupations is expected to decrease. Jobs will be created mainly through attrition of the present labour force. Replacement openings should offset the loss in employment, and some 6,400 job openings are expected over the forecast period. Such factors as shorter fashion cycles and revaluation of custom-made garments by an affluent clientele may cause the demand for tailors to increase. This trend is also marked by a broader product range.

4. LABOUR MARKET TRENDS (cont'd)

The use of new technologies may affect tailors' tasks. With the computer, it is possible to automatically alter patterns for made-to-measure orders. The desired size is stored on a terminal and changes to the pattern are calculated automatically. Cutting is becoming very important since it is not standardized and requires an experienced tailor.

A number of men's garments manufacturers use computer-controlled laser beams to cut the fabric. Because of these innovations, different skills may be required of tailors and dressmakers who work in factories.

5. EDUCATION AND SKILLS

There are a number of means of entry to these occupations. A community college diploma in men's or women's fashion technology or in fashion design is an asset for tailors, haute-couture dressmankers and suit makers. For ready-to-wear garment tailors, men's garment tailors and suit makers, a secondary vocational diploma in garment making, sales and styling, fashion and apparel option, is required. For dressmakers, specialization in garment repair and alteration is preferable.

6. SALARY

According to the 1986 census, the average salary of tailors and dressmakers working full time was $12,840.

MOTOR VEHICLE MECHANICS AND MOTOR VEHICULE REPAIRMEN

8581

Examples: Motorcycle Repairer, Snowmobile Repairer, Body Repairer, Tune-up Person, Garage Mechanic, Body Repairer-Painter, Muffler Installer, Auto Mechanic, Truck Mechanic, Bus Mechanic, Car Engine Mechanic

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
37,065	32,400	-3,000	3,925	-925

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
3,945	6,210	360	0	10,515

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	0.8	0.6	Under 25 years	28.8	-	Full-time	97.5	97.5
Males	99.2	99.4	Over 54 years	6.3	-	Part-time	2.5	2.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Retail Trade (74)
- Tire Stores (2)
- Gasoline Serv. Stations (6)
- Motor Vehicle Dealers (16)
- Motor Vehicle Repair Shops (48)
- Retailers, n.e.c. (2)

Transportation (6)
- Other Truck Transport (3)
- Urban Transit Systems (2)
- Other Transportation (1)

Wholesale Trade (3)
- Wholesale Motor Vehicles (3)

4. LABOUR MARKET TRENDS

Employment for this occupational group is expected to decline. The automobile repair sector has experienced rapid change in recent years. Factors such as the extension of warranties, the growing complexity of mechanical and electronic parts in vehicles and the high cost of diagnostic and repair devices has had the effect of concentrating activity in this field within the dealer network and facilitating the appearance of specialized repair shop chains. The concentration of repairs, both mechanical and body, has resulted in the closing down of a large number of independent garages which until then accounted for a high proportion of labour specializing in automobile repairs. These changes will continue to take place over the next few years and cause the demand for motor vehicle mechanics and repairers to decline. Nonetheless, the labour demand will persist, mainly because of the job openings created through attrition of the present labour force and especially because of the new skills required. The growing complexity of motor vehicles requires mechanics to have specialized skills and a knowledge of technological advances in their field. In addition to the usual skills in mechanics, a basic knowledge of

4. LABOUR MARKET TRENDS (cont'd)

electronics is a prerequisite. The employment outlook is brighter for mechanics who are familiar with such technological developments as safety and protection devices, electronic gadgetry on the dashboard as well as computer diagnosis. The latter requires that the mechanic be able to read codes and interpret computer data. Because of the complexity of the diagnosis procedure, the demand for mechanics specialized in this area should grow. New technologies have created a trend toward specialization. Thus, formerly non-specialized tasks such as the repair of oil and gas gauges and anti-pollution devices have become extremely specialized since the advent of light emitting diode (LED) gauges. Also, transmission mechanics are becoming increasingly specialized. The use of the new technologies should affect the electronic components of all the major components of the automobile, anti-lock brake system, four-wheel drive, variator transmission, unibody construction, new materials (plastic, new steel and ceramic alloys), the suspension and fuel injection systems. Mechanics with a knowledge of these new methods have an advantage on the labour market. The increase in the sale of imported cars means that mechanics with the specific skills required by the design and different construction of these cars as opposed to North-American cars face better job prospects. With the increase in the number of recreational vehicles and trailers, skills in installing and repairing shock absorbers and in automatic and manual balancing are increasingly in demand. For industrial mechanics, knowledge of electronics, microelectronics and propane and diesel combustion engines is in demand. The increased use of unibody construction requires that body repairers be able to modify the entire structure of the vehicle. Repairs using fibreglass are done more and more frequently in shops where snowmobiles and boats are repaired. This type of work will increase if the trend toward building fibreglass bodies continues. At the present time, there are few shops specializing in fibreglass repairs. In general, traditional skills in hydraulics, fuel combustion and mechanics in addition to a knowledge of electronics are very much in demand. An aptitude for understanding and using precision instruments and computers is an important asset, as well as the ability to write, understand and use circuit diagrams and instruction manuals. Manual dexterity for working on delicate electronic components is in demand.

5. EDUCATION AND SKILLS

Entry to this occupational group usually requires a secondary vocational course in motorized equipment, motor vehicle mechanics II option. Complementary options in motor vehicle mechanics I, body work and painting, body work or light motor vehicle mechanics are assets depending on the job desired.

6. SALARY

According to the 1986 census, the average salary of motor vehicle mechanics and repairers working full time was $21,027.

AIRCRAFT MECHANICS AND AIRCRAFT REPAIRMEN

8582

Examples: Helicopter Mechanic, Aircraft Engine Mechanic, Jet Mechanic

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
3,200	3,680	480	580	1,060

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
110	75	475	0	660

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	1.4	1.2	Under 25 years	18.7	-	Full-time	98.8	99.4
Males	98.6	98.8	Over 54 years	12.3	-	Part-time	1.2	0.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation (67)
- Air Transport (58)
- Serv. Incidental to Air Transportation (9)

Transportation Equip. Ind. (24)
- Aircraft & Aircraft Parts (24)

Gov't Service (4)
- Defence Services (4)

4. LABOUR MARKET TRENDS

Employment is expected to grow at about the average rate. This occupational group is concentrated mainly in the air transport and aircraft and aircraft parts manufacturing sectors. The demand for aircraft maintenance services is indirectly affected by factors that influence the growth of the air transport sector such as the overall economic climate, regulations and technological advances. The expected economic slowdown early in the forecast period could result in a reduction in travel spending. Deregulation of the air transport sector has increased competition among carriers and the wave of mergers and acquisitions should continue over the next few years. Though a contraction in the overall demand is expected in the short term, the long-term outlook should remain bright. The aging of the population is a factor which could cause an increase in the requirement for air transport and therefore in the demand for maintenance services. The growing number of well-to-do retirees could have a considerable positive effect on the requirement for recreational travel. The medium- and long-term demand for aircraft maintenance services should be stronger than the short-term demand. A number of other factors influence the demand for aircraft maintenance services: the age of the fleet, its size, its composition, use, air safety regulations and the reconditioning of old aircraft. The impact of these factors varies with the sector of the industry: helicopters require extended maintenance services, while air carriers are subject to strict

4. LABOUR MARKET TRENDS (cont'd)

regulations and must conform to safety standards and alterations that have an impact on the need for maintenance. Growing public concern about to safety is having an impact on safety standards and on suppliers of air services. Mandatory changes made to operational aircraft may have significant repercussions on the maintenance industry. The slow increase in the use of aircraft and the size of the fleet, resulting from the current economic slowdown and the continued consolidation of companies, could slow down the short-term demand for maintenance services. However, as the current fleets age and the industry adapts to globalization, the demand for maintenance services will grow.

Technological change affects the demand for aircraft mechanics and repairers and the skills required of them in the following three ways: through the introduction of aircraft equipped with new technology, through the reconditioning of old aircraft using old technology and through the advent of new maintenance technology. Technological advances in aircraft are changing maintenance techniques, mainly with respect to diagnosis, testing and inspection. Such manufacturing technologies as digitally controlled machines, have also had an impact on maintenance. Computer technology has made the management of maintenance operations easier. In this context, maintenance personnel must keep abreast of new developments, particularly with respect to their analytical and decision-making abilities in the area of diagnosis. Technical skills in electronics, avionics, computers and non-destructive testing, are in demand in certain aviation sectors. The demand for knowledge of new technologies should be gradual, but the skills required will change more and more.

Aircraft maintenance, revision, reconditioning and modifications require team work. Good communication skills are an asset. For aircraft technicians, the ability to read very technical manuals, blueprints and diagrams as well as interpret them is in demand. Diagnostic skills, knowledge of aircraft systems, of the aerodynamics of aircraft structures and basic applied mechanics are also in demand. An in-depth knowledge of electronics is necessary for avionics technicians working in a shop. Writing skills are important for preparing reports on defects. With the computerization of files, knowing how to use a computer keyboard in order to keep files up to date is essential. Basic computer knowledge is very important for propulsion and hydraulic technicians working in shops. Overall, the minimum requirements for aircraft maintenance trades have been raised. In addition to advanced technical skills, the ability to read and to communicate verbally are in demand.

5. EDUCATION AND SKILLS

Entry to the occupation of aircraft mechanic requires a college diploma in aircraft maintenance with one or two years' on-the-job training. Graduates must have their own basic tools. Aircraft technicians are trained through a college program recognized by Transport Canada and three to five years (depending on the specialty) of on-the-job training offered by the employer. The ability to work in a team and availability for on-the-job training are very important.

6. SALARY

According to the 1986 census, the average salary of aircraft mechanics and repairers working full time was $31,112.

RAIL TRANSPORT EQUIPMENT MECHANICS AND RAIL TRANSPORT EQUIPMENT REPAIRMEN

8583

Examples: Streetcar and Subway Car Mechanics, Brake Repairer, Car Repairer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,755	1,565	-190	265	75

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
45	0	0	0	45

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	1.0	1.2	Under 25 years	21.9	-	Full-time	99.1	98.6
Males	99.0	98.8	Over 54 years	16.6	-	Part-time	0.9	1.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation (89)
- Railway Transport (84)
- Urban Transit Systems (5)

Transportation Equip. Ind. (5)
- Railroad Rolling Stock (5)

4. LABOUR MARKET TRENDS

This occupational group is expected to lose some jobs. The jobs that will open up will be created for the most part through attrition of the current labour force. Most of the rail mechanics' jobs are in the railway transport sector. Given the depressed conditions in this sector, however, the employment outlook for this occupational group is very dim. In fact, the general rationalization and job reduction policy adopted since 1985 by most railway companies applies to all departments and should reduce the number of mechanics and repairers required. New inspection techniques such as digital train inspections, the installation of heat detectors and new indicators in the driver's cabin could have an impact on tasks, particularly those involving manual train inspection, and on the number of mechanics. Mechanics and repairers are increasingly required to have new skills, such as reading and preparing plans and diagrams related to electrical and electronic technologies. Shift work and overtime may be part of the regular schedule.

RAIL TRANSPORT EQUIPMENT MECHANICS AND RAIL TRANSPORT EQUIPMENT REPAIRMEN

8583

5. EDUCATION AND SKILLS

Employers prefer candidates who have completed their secondary school education. Candidates must undergo on-the-job training which may last from six months to four years depending on the specialty (car repairers, air valve repairers).

6. SALARY

According to the 1986 census, the average salary of rail mechanics and repairers working full time was $27,219.

INDUSTRIAL, FARM AND CONSTRUCTION MACHINERY MECHANICS AND REPAIRMEN

8584

Examples: Knitting Machine Adjuster, Turbine Repairer, Farm Machinery Repairer, Sewing Machine Repairer, Diesel Mechanic

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
25,482	26,240	760	4,320	5,080

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	LABOUR SUPPLY 1989-2000
1,945	2,620	255	0	4,820

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	1.0	1.1	Under 25 years	18.3	-	Full-time	98.6	98.5
Males	99.0	98.9	Over 54 years	11.2	-	Part-time	1.4	1.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Paper Industries (8)
- Pulp and Paper Mills (8)

Primary Metal Ind. (6)
- Iron and Steel Mills (2)
- Smelting and Refining (4)

Wood Industries (3)
- Sawmills (3)

Wholesale Trade (7)
- Farm machinery (3)
- Machinery & Equip., n.e.c. (4)

Mines, Quarries, Oil Wells (4)
- Iron Mines (2)
- Misc. Metal Mines (1)
- Asbestos Mines (1)

Rubber & Plastics Prod. Ind. (2)
- Rubber Prod. (1)
- Plastic Prod. (1)

Construction (6)
- Misc. Construction (1)
- Special Trade Contractors (5)

Textile Industries (4)
- Cotton & Yarn Cloth Mills (1)
- Man-made Fibre, Yarn & Cloth (1)
- Misc. Textile Ind. (2)

Food & Beverage Ind. (2)
- Dairy Ind. (1)
- Beverage Ind. (1)

4. LABOUR MARKET TRENDS

Employment for this occupational group should remain relatively stable. The jobs that will open up will be created for the most part through attrition of the current labour force. The increasing complexity of farm machinery (transmission and engine) and industrial equipment will lead to greater opportunities for those who do maintenance and repair work. Technological changes in the farming equipment sector have encouraged the use of wet clutches rather than the dry type, hydrostatic transmissions rather than the traditional manual or automatic ones, pneumatic control seeders rather than traditional ones, and the use of power steering. These advances have changed the jobs of farm machinery mechanics. Heavy machinery mechanics have also been affected by changes:

4. LABOUR MARKET TRENDS (cont'd)

gradual elimination of differential systems and replacement with hydrostatic controls, the use of wet friction clutches instead of dry clutches and the increased use of power steering all require new skills. Skills in the maintenance and repair of complex equipment involving robotics, welding, hydraulics, pneumatics, automation, computer-aided manufacturing processes, and computerization in the workplace are in demand.

5. EDUCATION AND SKILLS

There is no specific educational requirement for these occupations. A secondary vocational course in mechanics, maintenance mechanics option, or in agricultural technology, agricultural mechanics option, or in motorized equipment, diesel mechanics and heavy machinery options is an asset. In agricultural hydraulics technology, a college diploma is an important asset. To be able to work in construction, candidates must hold a permit issued by the Commission de la construction du Québec.

6. SALARY

According to the 1986 census, the average salary of mechanics and repairers of industrial and farm machinery working full time was $27,926.

BUSINESS AND COMMERCIAL MACHINE MECHANICS AND REPAIRMEN 8585

Examples: Cash Register Mechanic, Electronic Machine Mechanic, Typewriter Servicer, Cash Register Servicer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,720	1,420	-300	125	-175

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
60	0	0	0	60

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	2.4	1.9	Under 25 years	30.6	-	Full-time	97.1	98.5
Males	97.6	98.1	Over 54 years	5.5	-	Part-time	2.9	1.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (86 %)

Wholesale Trade (34)
- Electrical Machinery (3)
- Machinery & Equip., n.e.c. (31)

Misc. Services (9)
- Machinery Rental (9)

Electrical Prod. Industries (2)
- Communications Equip. (2)

Machinery Ind. (11)
- Office Machinery (11)

Communication (4)
- Post Office (4)

Business Services (11)
- Computer Services (6)
- Misc. Services (5)

Printing and Publishing (2)
- Commercial Printing (2)

4. LABOUR MARKET TRENDS

Forecasts indicate that this occupational group will lose jobs. Job openings will be created solely through attrition of the current labour force, but they will not be sufficient to offset the loss of employment. Though business machines are becoming increasingly versatile and widespread, the growing use of electronic components has made them more reliable and in need of fewer repairs than previously. However, demand for typewriter and printer servicers is expected to remain strong, while demand for service of traditional typewriters will diminish with the more widespread use of word and data processing equipment. Servicing of photocopiers and peripheral equipment and cash registers should increase with demand for such equipment. However, the growing variety and technical complexity of business machines have resulted in a trend toward specialization in a limited number of types and makes of equipment. As regards dictating machines and telephone answering machines, the trend toward

4. LABOUR MARKET TRENDS (cont'd)

equipment requiring little maintenance will reduce the number of job opportunities. Ability to benefit from training is necessary in these occupations because the ongoing development of the equipment means continual updating of skills. Upgrading of functional and practical skills, rather than theoretical knowledge, is essential for senior technicians (more than five years). Knowledge of microprocessors, digital circuits, servo systems, programmable monitors, telecommunications and data transmission is in demand. Good verbal communication skills and basic training in human relations and business practices are sought after by employers.

5. EDUCATION AND SKILLS

Entry to these occupations usually requires a secondary vocational course in mechanics, business machine mechanics option. Since machines differ from one company to the next, employers generally provide additional training on the company's machines.

6. SALARY

According to the 1986 census, the average salary of business and commercial machine mechanics and repairers was $23,879.

WATCH AND CLOCK REPAIRMEN

8587

Examples: Gas Meter Repairer, Watch Repairer, Parking Meter Mechanic

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
125	75	-50	40	-10

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
20	30	0	0	50

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	6.6	6.7	Under 25 years	16.4	-	Full-time	97.8	100.0
Males	93.4	93.3	Over 54 years	21.3	-	Part-time	2.2	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Retail Trade (66)
- Motor Vehicle Repair Shops (6)
- Furniture Stores (6)
- Jewellery Stores (16)
- Watch and Jewellery Repair Shops (38)

Elec. Power, Gas & Water Utilities (3)
- Electric Power (3)

Wholesale Trade (3)
- Machinery and Equipment, n.e.c. (3)

Misc. Manufacturing Ind. (13)
- Scientific & Prof. Equip. (13)

Health and Social Serv. (3)
- Hospitals (3)

- Gov't Service (6)
- Local Gov't Service (6)

Transportation (3)
- Highway & Bridge Maintenance (3)

4. LABOUR MARKET TRENDS

This occupational group is expected to lose jobs. Job openings will be created through attrition. Overall, the number of employment opportunities should decline, and a surplus of qualified labour is anticipated. The increasing durability and falling prices of watches have reduced the need to repair them. It is cheaper for consumers to replace rather than repair the new reliable electronic time pieces. As a result, employment opportunities for watchmakers and repairers have diminished. And as watches are now made of modular components, repair time and therefore the need for repairers is reduced. However, there is a market for the maintenance of expensive time pieces whose numbers are constantly growing.

WATCH AND CLOCK REPAIRMEN

8587

5. EDUCATION AND SKILLS

Entry to the occupation of watchmaker requires a secondary vocational course in mechanics, clockmaker option.

6. SALARY

According to the 1986 census, the average salary of watch and clock repairers was $19,892.

PRECISION INSTRUMENT MECHANICS AND REPAIRMEN

8588

Examples: Camera Repairer, Gyroscope Repairer, Aircraft Instrument Mechanic, Medical Instrument Repairer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
650	845	195	75	270

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
25	65	60	0	150

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	4.0	5.6	Under 25 years	20.5	-	Full-time	98.3	95.5
Males	96.0	94.4	Over 54 years	5.9	-	Part-time	1.7	4.5

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation Equip. Ind. (7)
- Aircraft & Aircraft Parts (7)

Health and Social Services (6)
- Hospitals (6)

Retail Trade (5)
- Retailers, n.e.c. (5)

Petroleum Prod. Ind. (4)
- Petroleum Refineries (4)

Printing and Publishing (3)
- Platemaking, Typesetting Trade Bindery (3)

Wholesale Trade (7)
- Machinery & Equip., n.e.c. (7)

Business Services (6)
- Scientific Studies and Services (6)

Misc. Manufacturing Ind. (5)
- Scientific and Prof. Equip. (5)

Mines, Quarries & Oil Wells (4)
- Iron Mines (2)
- Crude Petroleum and Nat. Gas (2)

Primary Metal Ind. (3)
- Smelting and Refining (3)

Transportation (6)
- Air Transport (6)

Misc. Services (6)
- Photography, n.e.c. (4)
- Equipment Rental (2)

Electrical Prod. Ind. (4)
- Communications Equip. (4)

Paper Industries (3)
- Pulp and Paper (3)

Chemical Prod. Industries (3)
- Plastics (3)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate. New computer technologies are increasing employment opportunities for precision instrument mechanics who have a knowledge of digital and analogue technology. Knowledge of microcomputers and programming is an asset. The growing sophistication of precision instruments, particularly those used in medicine, laboratories, the aircraft industry and telemetering means that jobs are opening up for specialized mechanics. The trend toward greater use of electric detectors, digital transmitters and indicators, electronic processing equipment, electronic transmitters, electric signal detectors and electronic control devices may stimulate employment opportunities for this occupational group.

5. EDUCATION AND SKILLS

Entry to these occupations requires a community college diploma in electrotechnology with a concentration in instrumentation-control, followed by six to twelve months of on-the-job training. Bilingualism is an asset.

6. SALARY

According to the 1986 census, the average salary of precision instrument mechanics and repairers working full time was $30,527.

OTHER MECHANICS AND REPAIRMEN, N.E.C.

8589

Examples: Auto Greaser, Oil Burner Servicer, Gunsmith, Locksmith, Vending Machine Servicer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,825	3,035	210	495	705

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	LABOUR SUPPLY 1989-2000
305	670	215	0	1,190

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	4.1	3.2	Under 25 years	25.2	-	Full-time	95.8	97.0
Males	95.9	96.8	Over 54 years	12.4	-	Part-time	4.2	3.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Retail Trade (26)
- Gasoline Serv. Stations (1)
- Motor Vehicle Dealers (2)
- Motor Vehicle Repair Shops (3)
- Radio and Television Repair Shops (1)
- Retailers, n.e.c. (19)

Wholesale Trade (6)
- Petroleum Prod. (2)
- Machinery and Equip., n.e.c. (3)
- Hardware Stores (1)

Misc. Manufacturing Ind. (2)
- Sporting Goods and Toys (2)

Misc. Services (16)
- Misc. Repair Shops (16)

Construction (4)
- Special Trade Contractors (4)

Paper Industries (8)
- Pulp and Paper (8)

Metal Fabricating Ind. (3)
- Architectural Metal Ind. (3)

4. LABOUR MARKET TRENDS

Forecasts indicate that employment will grow at a below-average rate, and the labour supply is expected to exceed the demand. This occupational group, encompassing small-engine repairers, can be subject to various market fluctuations; for instance, the introduction of gas has reduced demand for oil burner servicers, but the demand for gas servicers has increased. With respect to the repair of hydraulic equipment, skills in practical hydraulics, pneumatics and automation are in demand.

5. EDUCATION AND SKILLS

Entry to these occupations varies with the specialty. Gunsmiths require some secondary schooling, locksmiths require Secondary II, as do vending machine servicers, although a secondary vocational course in electrotechnology, vending machine option, is an asset to the latter. Small-engine mechanics-repairers must have completed a secondary vocational course in motorized equipment, light vehicle mechanic option.

6. SALARY

According to the 1986 census, the average salary of mechanics and repairers working full time, with the exception of electricians n.e.c. was $22,412.

JEWELLERY, SILVERWARE FABRICATING, ASSEMBLING AND REPAIRING OCCUPATIONS

8591

Examples: Diamond Setter, Gem Cutter, Jeweller, Gemologist, Polisher

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,755	2,540	785	560	1,345

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
190	-	-	-	190

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	29.5	34.2	Under 25 years	19.4	-	Full-time	91.0	91.3
Males	70.5	65.8	Over 54 years	11.0	-	Part-time	9.0	8.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Misc. Manufacturing Ind. (52)
- Scient. & Prof. Equip. (1)
- Jewellery & Silverware (51)

Retail Trade (41)
- Jewellery Stores (33)
- Watch & Jewellery Repair Shops (8)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate, based on the outlook in the retail trade sector. According to the 1986 census, more than 40% of jewellers were working in the commercial sector and 52% in the manufacturing sector. In the jewellery industry, the future lies in the creation of beautiful high-quality pieces. Jewellers are increasingly required to use their creative abilities. For jewellers in medium quality and bargain jewellery shops, the outlook is not as good since the market is saturated with these types of businesses. Jewellery making has not experienced great technological changes (except for numeric control). The existing sophisticated machines have not really changed the trade and their use is not widespread.

5. EDUCATION AND SKILLS

Entry to these occupations is usually requires a secondary vocational course in mechanics, jeweller or jewellery handicraft option. The Quebec Jewellers' Corporation offers a two-year correspondence course in jewellery making. Registration with the Corporation is not compulsory.

6. SALARY

According to the 1986 census, the average salary of diamond setters, lapidaries, jewellers and silverware workers who were employed full time was $15,588.

MARINE CRAFT FABRICATING, ASSEMBLING, REPAIRING OCCUPATIONS

8592

Examples: Shipwright, Rigger, Outboard Motor Mechanic, Wooden Boat Repairer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,835	2,260	425	515	940

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
190	160	45	-	395

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	2.4	1.3	Under 25 years	25.9	-	Full-time	93.4	96.3
Males	97.6	98.7	Over 54 years	14.2	-	Part-time	6.6	3.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation Equip. Ind. (71)
- Shipbuilding and Repair (41)
- Boatbuilding and Repair (30)

Construction Industry (9)
- Building Construction (3)
- Other Construction (2)
- Special-trade Construction (4)

Retail Trade (3)
- Retailers, n.e.c. (3)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a rate slightly above the average. This sector of employment is often unstable because it is vulnerable to market conditions and interest rates. Trends in these occupations are directly related to trends in ship repair and maintenance. In the medium term, government contracts for regatta construction should maintain employment opportunities. However, prospects in the motorboat construction industry may be checked by the recent difficulties experienced by this industry due to the drop in the demand for pleasure boats which is very sensitive to economic conditions. Moreover, a slowdown has been noted in the renewal of fishing-boat fleets, and this could mean a shift from construction work toward maintenance and repair. Technological changes in the naval construction industry have involved the use of laser beams for welding and cutting of steel and steel alloys. Skills in the operation of tools and machinery affected by this new technology are in demand.

5. EDUCATION AND SKILLS

The minimum requirement for entry to these occupations is completion of secondary school. The skills required vary with the area of specialization and the type of boat that is being built or repaired. College-level courses, with an emphasis on welding, mechanics, piping and marine engineering may facilitate entry to these occupations. Some necessary skills are acquired through on-the-job training. For outboard motor mechanics, a secondary vocational course in motorized equipment, light vehicle general mechanic option, is required.

6. SALARY

According to the 1986 census, the average salary of marine craft builders and repairers working full time was $24,776.

EXCAVATING, GRADING AND RELATED OCCUPATIONS

8711

Examples: Cat Operator, Heavy Equipment Operator, Grader Operator, Backhoe Operator, Pipe Layer, Bulldozer Operator, Digger Operator, Excavator

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
9,035	8,215	-820	1,450	630

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
3,985	-	-	-	3,985

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	1.0	0.9	Under 25 years	11.0	-	Full-time	98.1	95.0
Males	99.0	99.1	Over 54 years	10.6	-	Part-time	1.9	5.0

3. MAIN SECTOR PROVIDING EMPLOYMENT (1986 %)

Construction Industry (61)
- Building Construction (5)
- Highway, Bridge Constr. (10)
- Other Construction (7)
- Special-trade Contractors (39)

Forestry (5)
- Logging (5)

Transportation (9)
- Other Truck Transport (2)
- Road and Highway Maint. (7)

Wood Industries (3)
- Sawmills (3)

Gov't Service (6)
- Provincial Service (1)
- Provincial Service (5)

Paper and Allied Ind. (2)
- Pulp and Paper Mills (2)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a below-average rate. Job openings will result mainly from attrition of the present labour force. The long-term outlook depends on general economic conditions, more specifically those affecting the large hydroelectric projects. Until the mid-1990s, Hydro-Quebec's Great Whale project should result in an increase in the demand for excavation workers. Reconstruction and improvement of the roads and infrastructure should also help to increase the number of job opportunities. At the end of the forecast period, employment should return to lower levels. However, the forecasts shown above do not include the second phase of the Hydro-Quebec project which may be completed toward the end of the 1990s. Implementation of the project could reverse the forecast trend and maintain the demand for excavation workers and graders.

4. LABOUR MARKET TRENDS (cont'd)

Technological advances have had an impact on these occupations due to the use of new, more productive equipment allowing operators to do more work with more precision than previously. This trend should continue over the next few years. Employment is seasonal, and the jobs available are sometimes in remote regions.

5. EDUCATION AND SKILLS

Formerly, beginners learned on the job. However, with the use of increasingly technical machinery, a secondary vocational course in motorized equipment, digger operator or heavy equipment option, is an asset. An apprentice time card or a professional competency certificate is required.

6. SALARY

According to the 1986 census, the average salary of excavation workers, graders and related workers who were employed full time was $26,237.

ELECTRICAL POWER LINE WORKERS AND RELATED OCCUPATIONS 8731

Examples: Lineman, Electric Power Line Repairer, Cable Installer-Repairer

1. LABOUR MARKET TRENDS 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
3,875	5,215	1,340	420	1,760

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	GRADUATES 1989-2000 COMMUNITY COLLEGE	GRADUATES 1989-2000 UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
525	-	-	-	525

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	1.4	2.3	Under 25 years	20.7	-	Full-time	96.5	-
Males	98.6	97.7	Over 54 years	6.2	-	Part-time	3.5	-

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transp., Comm., Public Util. (57)
- Telephone Systems (2)
- Electric Power (55)

Construction Industry (33)
- Other Construction (21)
- Special-trade Contractors (12)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate due to the completion of the James Bay hydroelectric projects. The increase in electricity exports to the United States should bring about the construction of new power plants and thus stimulate the demand for line workers. Line workers assigned to construction, rather than maintenance, are expected to enjoy the greatest employment growth. However, employment in the services and maintenance sector should increase as transmission and distribution networks grow in size and complexity.

5. EDUCATION AND SKILLS

Entry to these occupations is made easier by completion of a secondary vocational course in electrical installation or in electrical assembly of power lines, distribution and transport.

6. SALARY

According to the 1986 census, the average salary of line installers and related workers who were employed full time was $34,585.

CONSTRUCTION ELECTRICIANS AND REPAIRMEN

8733

Examples: Meter Installer, Electrical Contractor, Building Wiremen

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
12,415	11,540	-875	1,385	510

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
2,670	2,605	1,680	-	6,955

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	1.0	1.0	Under 25 years	20.7	-	Full-time	96.5	96.2
Males	99.0	99.0	Over 54 years	6.2	-	Part-time	3.5	3.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Construction Industry (67)
- Building Construction (2)
- Special-trade Contractors (65)

Manufacturing Industries (4)

Transportation, Comm. and Other Public Util. (6)
- Railway Transport (1)
- Electric Power (5)

Paper and Allied Industries (3)
- Pulp and Paper Mills (3)

4. LABOUR MARKET TRENDS

Employment in this occupational group is expected to decrease. Job openings will result mainly from attrition of the present labour force. Construction electricians are employed for the most part in the construction (new) sector, and a smaller portion of their work is devoted to maintenance, repair renovation and modification of electric installations. Low investments in construction, particularly the drop anticipated in the residential construction sector, and the moderate growth in industrial construction should slow down employment growth in this group. The James Bay hydroelectric engineering construction project should maintain job opportunities, particularly during the first half of the forecast period. Technological developments in building design could translate in the long term into an increase in the number of electricians' jobs available. The increased use of various types of computerized control systems in buildings, such as heating, air conditioning, ventilation, elevators and lighting, should create employment prospects for those who install this equipment and connect the systems. New skills are required as a result of increased use of PVC covering and the replacement of old conduits with mineral-insulated and aluminum-covered cable. Knowledge of electricity as well as complementary training in welding, electronics, hydraulics, pneumatics and programmable automatons,

5. EDUCATION AND SKILLS

are in demand. Analytical skills are an asset since electricians must be able to understand building plans and connection diagrams. There is no specific educational requirement for entry to these occupations. However, a secondary vocational course in electrotechnology, construction electrician or maintenance electrician option, is an asset. Construction electricity candidates must register for an apprenticeship and obtain certification from the Ministère de la main d'oeuvre and the Commission de la construction du Québec. Candidates must have completed 8,000 hours of work and an apprenticeship as well as pass a qualifying exam in order to obtain the certificate and attain the status of journeyman. Following the new professional training and qualification program in force since 1987, school training is strongly recommended in order to attain construction electrician apprentice status.

6. SALARY

According to the 1986 census, the average salary of construction electrician and repairers working full time was $28,997.

WIRE COMMUNICATIONS AND RELATED EQUIPMENT INSTALLING AND REPAIRING OCCUPATIONS

8735

Examples: Line Installer, Alarm System Installer, Telephone Electrician, Switchboard Repairer, Telex Installer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
6,300	6,285	-15	605	590

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
295	80	215	-	590

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	4.7	5.5	Under 25 years	28.2	-	Full-time	98.8	98.7
Males	95.3	94.5	Over 54 years	4.8	-	Part-time	1.2	1.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transp., Comm., & Publ. Util.(71)
- Railway Transport (1)
- Radio and Television Broad. (7)
- Telephone Systems (58)
- Electric Power (5)

Construction Industry (10)
- Other Construction (1)
- Special-trade Contractors (9)

Electrical Prod. Ind. (9)
- Communications Equip. (7)
- Electric Wire and Cable (2)

4. LABOUR MARKET TRENDS

Employment in these occupations is expected to decrease. Job openings will result mainly from attrition of the present labour force. The cable broadcasting network may continue to expand, due to the advent of fibre optics telecommunications. Depending on the extent to which this technology is used and the speed of its integration into existing telecommunications systems and if, in addition, it is applied to commercial and residential sectors, the demand for these specialized technicians may experience a considerable increase. On the other hand, the low level of activity expected in the residential construction sector may limit the demand for installers and repairers of wires working in this industrial sector. Technological advances have had a major impact on the telecommunications sector. Computerized switching systems are widely used and replace the earlier electromechanical switches which needed considerable routine maintenance. Self-diagnostic capability in the event of problems is engineered into the equipment, and the need for maintenance has been considerably reduced. Knowledge of new technologies, such as those related to fibre optics and computers, is an asset. Candidates' ability to upgrade their skills as new technologies are introduced is in demand.

5. EDUCATION AND SKILLS

Entry to these occupations usually requires a secondary vocational course in electrotechnology or in home appliances servicing, with specialization in the installation and repair of telecommunications equipment. For alarm system installers, a secondary course in electromechanics of automated systems or in repair and servicing, is preferable. Communications equipment technicians must have a community college diploma in electronics and telecommunications.

6. SALARY

According to the 1986 census, the average salary of installers-repairers of wire communications and related equipment working full time was $32,805.

INSPECTING, TESTING, OCCUPATIONS: ELECTRICAL POWER, LIGHTING AND WIRE COMMUNICATIONS EQUIPMENT ERECTING, INSTALLING AND REPAIRING

8736

Examples: Line Inspector, Telecom Powerline Patroller, Load Checker, Test-table Operator, Switch Inspector

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,645	1,685	40	295	335

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
20	-	-	-	20

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	13.9	19.3	Under 25 years	16.5	-	Full-time	98.1	98.6
Males	86.2	80.7	Over 54 years	9.9	-	Part-time	1.9	1.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transp., Comm., & Publ. Util.(59)
- Radio and Television Broad. (3)
- Telephone Systems (31)
- Electric Power (25)

Construction Industry (3)
- Other Construction (1)
- Special-trade Contractors (2)

Electrical Prod. Ind. (28)
- Communications Equip. (20)
- Electrical Ind. Equip. (2)
- Electric Wire and Cable (5)
- Misc. Electrical Prod. (1)

Gov't Service (3)
- Other Federal Service (1)
- Provincial Service (1)

4. LABOUR MARKET TRENDS

Employment in this occupational group should remain relatively stable. Most job openings will result from attrition of the present labour force. Technological advances have had a negative impact on employment growth in this group. The computerization of switching systems, which makes self-diagnosis of the equipment possible and cuts down on equipment maintenance, together with long-distance diagnosis systems, is likely to reduce the demand for inspectors. Moreover, the dim outlook in the construction sector where electricity needs are great may contribute to a slowdown in employment.

5. EDUCATION AND SKILLS

Workers in these occupations are promoted after several years' experience as installers-repairers of electrical systems. Candidates with a secondary school diploma who have completed a college-level technical program in a field such as electricity, electronics or instrumentation, have an advantage. Owing to rapid technological changes, inspectors must have an ability to upgrade their skills.

6. SALARY

According to the 1986 census, the average salary of workers in these occupations who were employed full time was $33,825.

CARPENTERS AND RELATED OCCUPATIONS

8781

Examples: Carpenter, Joiner, Framer, Wood Tile Layer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
30,125	28,160	-1,965	7,505	5,540

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
8,775	765	-	-	9,540

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	0.7	1.1	Under 25 years	13.6	-	Full-time	94.8	93.8
Males	99.3	98.9	Over 54 years	19.2	-	Part-time	5.2	6.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Construction Industry (70)
- Building Construction (47)
- Other Construction (1)
- Special-trade Contractors (22)

Education (2)
- Elem. and Sec. School (2)

Wood Industries (5)
- Sash, Door & Other Mill-work Plants (5)

Gov't Service (2)
- Local Gov't Service (2)

Furniture & Fixture Industry (2)
- Household Furniture Man. (2)

4. LABOUR MARKET TRENDS

Employment is expected to decrease in this occupational group. Job openings will result mainly from attrition of the present labour force. Since these occupations are concentrated in construction, they are very sensitive to employment trends in this sector. Residential construction, the main employment area for carpenters, should experience a slowdown under the impact of such factors as the population decline in the 25-34 age group, the largest group of potential home buyers, and the low growth rate of new households. The completion of large industrial construction projects early in the forecast period and the low level of commercial construction activity are factors that could cause the demand for carpenters to decline. Engineering construction work stimulated by the James Bay project could create openings for these workers during the first half of the forecast period. Technological advances involving new building materials and new methods of construction have an adverse effect on the number of carpenters and their tasks. The use of new building materials besides wood, and new construction methods could bring about a drop in the demand for carpenter-joiners. Moreover, prefabrication of various components such as whole wall panels and kitchen cabinets, which significantly cut down on building time,

4. LABOUR MARKET TRENDS (cont')

and the use of other materials besides wood, such as metal frames, may cause job opportunities to decrease and restrict the type of work they can do. The use of reusable sectional formwork for pouring cement could limit the need for these workers and reduce their tasks, which would consist of adjusting and fastening tables in place and building non-standard forms, elevator shafts). The appearance of new specialties, such as installers of interior systems, could limit the tasks of carpenters even further.

5. EDUCATION AND SKILLS

A secondary vocaitonal course in furniture and construction, construction I or construciton carpenter option, is an asset. Candidates wishing to become assistant carpenters must undergo on-the-job training.

6. SALARY

According to the 1986 census, the average salary of carpenters and related workers who were employed full time was $23,918.

BRICK AND STONE MASONS AND TILESETTERS

8782

Examples: Bricklayer, Terrazzo Setter, Brick Setter, Tombstone Setter

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
5,475	5,625	150	905	1,055

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
1,570	380	-	-	1,950

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	0.5	0.5	Under 25 years	12.5	-	Full-time	89.6	96.3
Males	99.5	99.5	Over 54 years	12.3	-	Part-time	10.4	3.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Construction Ind. (84)
- Building Construction (9)
- Special-trade Contractors (75)

Primary Metal Industry (2)
- Iron and Steel Mills (1)
- Smelting and Refining (1)

Paper Industries (2)
- Pulp and Paper Mills (2)

4. LABOUR MARKET TRENDS

Employment in this occupational group is expected to remain relatively stable. Job openings will result mainly from attrition of the present labour force. Employment trends in these occupations are very sensitive to the outlook in the construction sector. During the forecast period, the activity level in this industry should remain rather low, particularly in residential, commercial and industrial construction. The renovation of existing buildings should help to maintain employment for this group of workers. Opportunities for stone masons are limited owing to the cost of stone as a building material. The outlook for tilesetters is good, since the use of tile in the home, restaurants and offices has increased. Technological changes have very little impact on these occupations.

5. EDUCATION AND SKILLS

There is no specific educational requirement for these occupations. For tilesetters, a secondary vocational diploma in furniture and construction, bricklayer-mason or construction I or II option, is an asset. A professional competency certificate in bricklaying-masonry and an apprentice time card issued by the Commission de la construction du Québec is compulsory.

6. SALARY

According to the 1986 census, the average salary of masons and tilesetters working full time was $25,582.

CONCRETE FINISHING AND RELATED OCCUPATIONS

8783

Examples: Cement Mason, Cement Finisher, Sidewalk Layer, Terrazzo Worker

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,600	1,670	70	280	350

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
455	-	-	-	455

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	0.3	0.6	Under 25 years	14.1	-	Full-time	90.0	96.4
Males	99.7	99.4	Over 54 years	13.4	-	Part-time	10.0	3.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Construction Industry (67)
- Building Construction (9)
- Hwy., Bridge & Str. Constr.(4)
- Other Construction (7)
- Special-trade Contractors (47)

Non-met. Min. Prod. Ind. (21)
- Cement Man. (6)
- Concrete Prod. Man. (8)
- Ready-Mix Concr. Man. (5)
- Misc. Non-met. Min. Prod. Ind. (2)

Primary Metal Industry (2)
- Smelting and Refining (2)

4. LABOUR MARKET TRENDS

Employment in this occupational group is expected to remain relatively stable. Cement masons work mainly on non-residential construction projects and in some engineering sectors of the industry. Despite the completion of large industrial construction projects in the aluminum sector, the demand for these workers could be maintained by work on the James Bay hydroelectric project, particularly in the first half of the forecast period. This demand could also be maintained by road repair work. The recent trend toward greater use of concrete construction will tend to increase employment. However, technological changes may curb the positive impact of this trend. The use of prefabricated materials, such as pre-cast concrete components, including concrete pipes and concrete structural elements reducing the amount of construction time required, could adversely affect the need for cement finishers in the construction industry. The use of re-usable moving formwork for pouring cement could also cut the time needed for erecting forms, reducing job opportunities for these workers. The acquisition of practical business skills is a definite asset for those who wish to work as entrepreneurs.

5. EDUCATION AND SKILLS

There is no specific educational requirement for entry to these occupations but a secondary vocational course in furniture and construction, construction worker option, is an asset. Certification by the Commission de la construction du Québec (CCQ) is compulsory.

6. SALARY

According to the 1986 census, the average salary of cement finishers and related workers who were employed full time was $25,420. According to the Construction Decree of 1987, journeyman earned an average of $17.40 per hour and apprentices, $14.79.

PLASTERERS AND RELATED OCCUPATIONS

8784

Examples: Plasterers, Drywall Installer, Stucco Plasterer, Joint Filler, Lather

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
3,555	4,700	1,145	555	1,700

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
640	-	-	-	640

OTHER IMPORTANT REQUIREMENTS

The use of drywall panels reduces the demand for plasterers.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	0.6	1.3	Under 25 years	14.0	-	Full-time	90.2	91.8
Males	99.4	98.7	Over 54 years	6.4	-	Part-time	9.8	8.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Construction Industry (91)
- Building Construction (24)
- Special-trade Contractors (67)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate. Employment trends in this group depend on activity in the construction industry. Investment in commercial and institutional construction should remain moderate. The residential construction sector is expected to show a decline. However, the renovation of older buildings and new building insulation standards should stimulate the demand for drywall installers. The use of drywall instead of plaster as a finishing material increases the demand for drywall installers and joint fillers, to the detriment of plasterers, the demand for whom is expected to decrease significantly. Certain types of home renovation and special decorative work will continue to require the services of plasterers.

5. EDUCATION AND SKILLS

There is no specific educational requirement for these occupations. However, a secondary vocational course in furniture and construction, construction worker option, is an asset. A professional competency certificate is compulsory to be able to work on construction sites. Accreditation is normally granted upon successful completion of an apprenticeship program. In Quebec, lathers must have a professional competency certificate.

6. SALARY

According to the 1986 census, the average salary of plasterers and related workers who were employed full time was $23,685.

PAINTERS, PAPERHANGERS AND RELATED OCCUPATIONS

8785

Examples: Painter, Paperhanger, Bill Poster

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
8 605	8,340	-265	1,795	1,530

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
1,330	165	-	-	1,495

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	3.5	6.0	Under 25 years	18.7	-	Full-time	95.3	92.1
Males	96.5	94.0	Over 54 years	14.3	-	Part-time	4.7	7.9

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Construction Industry (58)
- Building Construction (6)
- Special-trade Contractors (52)

Fin., Ins. & Real Estate (2)
- Real Estate Operators (2)

Health and Social Services (4)
- Hospital Services (3)
- Related Health-Care Inst. (1)

Education (2)
- Elem. and Sec. Schools (2)

Gov't Service (3)
- Local Gov't Service (3)

Personal Services (2)
- Private Households (2)

4. LABOUR MARKET TRENDS

Employment in this occupational group is expected to decrease. Job openings will result mainly from attrition of the present labour force. The demand for painters is sensitive to general economic conditions and the outlook in the construction industry in particular. The low level of activity anticipated in the construction industry, particularly the residential sector, should affect the demand for painters working in the maintenance of new buildings. Maintenance of existing buildings and other structures should create a more stable source of employment. New, more efficient ways of applying paint and more durable paints appear to translate into a reduction in the need for painting services. Employment in this occupational group is seasonal since outdoor work is rarely carried out in the winter months.

5. EDUCATION AND SKILLS

There is no specific educational requirement for entry to these occupations, but a secondary vocational course in furniture and construction, painter and paperhanger option, is an asset. A professional competency certificate is compulsory.

6. SALARY

According to the 1986 census, the average salary of painters, paperhangers and related workers who were employed full time was $22,400.

INSULATING OCCUPATIONS, CONSTRUCTION

8786

Examples: Insulation Installer, Insulation Blower, Asbestos Insulator

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,340	1,350	10	185	195

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
230	-	-	-	230

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	1.6	2.6	Under 25 years	28.4	-	Full-time	91.7	93.2
Males	98.4	97.7	Over 54 years	6.0	-	Part-time	8.3	6.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Construction Ind. (81)
- Building Construction (5)
- Special-trade Contractors (76)

Non-Metallic Min. Prod. Ind. (2)
- Misc. Non-Metallic Min. Prod. (2)

Transportation Equip. Ind. (2)
- Shipbuilding and Repair (2)

Petroleum Prod. Ind. (2)
- Petroleum Refineries (2)

4. LABOUR MARKET TRENDS

Employment in this occupational group is expected to remain relatively stable. Job openings will result mainly from attrition of the present labour force. During the 1970s, employment in these occupations rose dramatically, due to rising energy prices, government programs for the installation of new insulating materials in older buildings and the raising of insulation standards for new buildings. Since government insulation programs have been discontinued and most older buildings have been equipped with additional insulation, it is not very likely that this group will experience such rapid growth again. However, higher standards of insulation for new buildings should help to maintain job opportunities for these workers. Some technological changes concerning construction methods and building materials could have an adverse effect on the demand for insulating services. Although they are not employed consistently on all building construction sites or even within the same site, new work methods using prefabricated panels already insulated could reduce employment growth for this occupational group as the panels become more popular.

5. EDUCATION AND SKILLS

There is no educational requirement for entry to these occupations. An apprenticeship program is available in Quebec. A professional competency certificate is compulsory. A secondary vocational course in furniture and construction, construction worker option, is an asset. Most beginners in the trade are secondary school graduates.

6. SALARY

According to the 1986 census, the average salary of those working in insulating occupations who were employed full time was $27,774.

ROOFING, WATERPROOFING AND RELATED OCCUPATIONS

8787

Examples: Roofer, Waterproofer, Tar Roofer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,315	3,030	715	260	975

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
985	-	-	-	985

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	0.9	0.7	Under 25 years	25.1	-	Full-time	91.7	84.0
Males	99.1	99.3	Over 54 years	4.1	-	Part-time	8.3	16.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Construction Industry (93)
- Building Construction (8)
- Special-trade Contractors (85)

Metal Fabricating Industries (2)
- Metal Coating Ind. (2)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate. Roof rebuilding and repair will create a large portion of the work for these workers, making the demand for their services less sensitive to periods of recession. Employers have indicated that they have difficulties recruiting workers since apprentices seem to abandon the occupation before becoming journeymen. Recent technological changes involving new coating materials (liquid, membranes, etc.) and some new processes have had an impact on the tasks of this group. Knowledge of new materials and processes is an asset. Metal roofing will still be used often, especially since solar heating systems require a metal roof. The demand for shingle roofs should remain stable. Clay tiles are rarely used; most buildings with clay tiles are more than 50 years old and this could reduce the demand for tile layers.

5. EDUCATION AND SKILLS

There is no specific educational requirement for entry to these occupations. A secondary vocational course in roofing is an asset. An apprentice time card or a professional competency certificate is required. A registration certificate issued by the Commission de la construction du Québec is compulsory.

6. SALARY

According to the 1986 census, the average salary of roofing, waterproofing and related workers who were employed full time was $24,576.

PIPEFITTING, PLUMBING AND RELATED OCCUPATIONS

8791

Examples: Plumber, Pipefitter, Steamfitter, Sprinklerfitter, Heating Unit Installer

1. LABOUR MARKET TRENDS FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
12,005	11,015	-990	2,125	1,135

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
1,870	360	55	-	2,285

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986
Females	0.7	0.9
Males	99.3	99.1

AGE	1981	1986
Under 25 years	11.8	-
Over 54 years	11.6	-

STATUS	1981	1986
Full-time	96.3	96.3
Part-time	3.7	3.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Construction Industry (59)
- Building Construction (2)
- Other Construction (2)
- Special-trade Contractors (55)

Paper Industries (6)
- Pulp and Paper Mills (6)

Gov't Service (3)
- Local Gov't Service (3)

Health and Social Services (3)
- Hospitals (3)

Transportation Equip. ind. (2)
- Shipbuilding and Repair (2)

Transportation (2)
- Railway Transport (2)

4. LABOUR MARKET TRENDS

Employment is expected to decrease in this occupational group. Job openings will result mainly from attrition of the present labour force. Labour supply should exceed the number of available openings. Employment in this group depends on activity in the construction sector and is subject to cyclical fluctuations. Investments in industrial and engineering construction, mainly the James Bay project, could create openings for these workers during the first half of the forecast period. However, low activity levels in other construction sectors could bring about a decrease in demand in the second half of the period. Maintenance, which accounts for a large part of the work, is less sensitive to economic conditions. Stronger demand for hygienic appliances such as saunas, whirlpools and bidets, could improve the demand for plumbing services slightly. The growing use of plastic pipes and other materials for the evacuation of acid, corrosive, chemical and bacterial waste, requires a knowledge of new fitting methods. Technological advances appear to have little impact on employment in this group. In general, skills in blueprint reading and welding are in demand.

5. EDUCATION AND SKILLS

There is no specific educational requirement for entry to these occupations, but a secondary vocational course in hydrothermics, plumbing-heating or pipe fitting option, is an asset. Candidates must have completed 8,000 hours of apprenticeship training. The Department of Labour recognizes 2,000 hours for graduates. Graduates must successfully complete the examinations set by the Department in order to obtain the title of junior journeyman. An apprentice time card or a professional competency certificate is required.

6. SALARY

According to the 1986 census, the average salary of pipefitters, plumber and related workers who were employed full time was $28,466.

STRUCTURAL METAL ERECTORS

8793

Examples: Structural Metal Erectors, Construction Ironworker

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,820	1,755	-65	205	140

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
885	65	-	-	950

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	1.2	0.9	Under 25 years	15.0	-	Full-time	95.3	93.9
Males	98.8	99.1	Over 54 years	7.9	-	Part-time	4.7	6.1

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Construction Industry (64)
- Building Construction (12)
- Other Construction (11)
- Special-trade Contractors (41)

Transportation Equip. Ind. (3)
- Shipbuilding and Repair (3)

Metal Fabricating Ind. (15)
- Structural Metal Ind. (8)
- Architectural Metal Ind. (3)
- Wire and Wire Prod. Man. (3)
- Misc. Metal Fabr. Ind. (1)

Transp., Comm. and Other Util. (3)
- Railway Transport (2)
- Electric Power (1)

Wholesale Trade (3)
- Metal Wholesalers, n.e.c. (2)
- Scrap and Waste Materials (1)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a below-average rate. Job openings will result mainly from attrition of the present labour force. The labour supply could exceed the demand. Structural metal erectors are employed mainly in the construction industry. Employment in this occupation is sensitive to fluctuations in the construction industry. The number of projects in commercial and institutional construction is expected to remain low and in residential construction, even lower. This situation should cause the demand for these workers to decline. Construction related to hydroelectric resources should create job opportunities. The increasingly frequent use of concrete to replace metal frames could have an adverse effect on employment for this group of workers.

5. EDUCATION AND SKILLS

Entry to the construction ironworker trade is through a compulsory one-year apprenticeship program governed by the province, with no educational requirement. A secondary vocational diploma in sheet metal mechanics is an asset. A registration certificate issued by the Commission de la construction du Québec is required.

6. SALARY

According to the 1986 census, the average salary of structural metal erectors working full time was $26,644.

GLAZIERS

8795

Examples: Glazier, Glass Installer, Windshield Repairer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,085	3,340	1,255	285	1,540

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
270	65	-	-	335

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	3.5	1.7	Under 25 years	26.8	-	Full-time	99.1	97.7
Males	96.5	98.3	Over 54 years	5.1	-	Part-time	0.9	2.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Construction Industry (36)
- Building Construction (1)
- Special-trade Contractors (35)

Wood Industries (3)
- Sash, Door and Other Millwork Plants (3)

Commerce (32)
- Lumber and Building Mat. (4)
- Motor Vehicle Repair Shops (2)
- Hardware Stores (13)
- Misc. Stores (13)

Metal Fabricating Industries (30)
- Ornamental and Architectural Metal Industry (6)
- Glass and Glass Prod. Man. (12)
- Non-Metallic Min. Prod. Ind. (12)

4. LABOUR MARKET TRENDS

Employment is expected to grow at an above-average rate. Although these occupations are affected by variations in the construction industry, employment is less subject to cyclical fluctuations because glass must be replaced frequently. Employment opportunities may result from the retrofitting of double and triple glazed windows as a measure to increase the energy efficiency of buildings. The new trend in residential construction toward using pre-fabricated glass windows and doors assembled in the factory by glaziers, but installed in buildings by joiners, could decrease the demand for glaziers in this area of construction, to the advantage of those who work in factories. Nonetheless, the construction sector accounts for 36% of glaziers' jobs, followed by the wholesale and retail trade sectors and the manufacturing industry.

5. EDUCATION AND SKILLS

Entry to these occupations is through a compulsory apprenticeship program governed by the province. A professional competency certificate issued by the parity committee of flat glass industry is compulsory. A secondary vocational diploma in glass mechanics and assembly is an asset.

6. SALARY

According to the 1986 census, the average salary of glaziers working full time was $21,739.

AIR PILOTS, NAVIGATORS AND FLIGHT ENGINEERS

9111

Examples: Commercial Pilot, Helicopter Pilot, Aircraft Captain, Flight Engineer, Aerial Crop Duster Pilot, Test Pilot - Air Transport

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,295	1,280	-15	100	85

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
225	-	175	80	480

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	3.6	2.0	Under 25 years	18.4	-	Full-time	97.9	98.4
Males	96.4	98.0	Over 54 years	1.6	-	Part-time	2.1	1.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation (84)
- Air Transport (76)
- Misc. Serv. Inc. to Transport (8)

Transportation Equip. Ind. (3)
- Aircraft & Aircraft Parts (3)

Gov't Service (2)
- Provincial Service (2)

Forestry (2)
- Logging (1)
- Forestry Services (1)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a below-average rate. Jobs will be created mainly through attrition of the present labour force. With deregulation of air transport, despite the emergence of a number of commercial carriers, there has been a wave of mergers and acquisitions which should continue over the next few years. This should have an impact on the demand for pilots. In the short term, several factors will affect the aviation sector. Air transport activities depend on the economic growth rate. Travel consumption is very sensitive to the economic climate. The forecast economic slowdown should bring about a weaker growth in this type of spending. In the long term, the demand for air services is expected to grow and the requirement for pilots to increase. For helicopter pilots, a turbine helicopter endorsement is essential. There are always openings in instructing and dusting. The computerization of piloting makes the pilot's work easier. Flight management in certain types of airplanes determines the most direct and most efficient flight route, from take-off to landing.

5. EDUCATION AND SKILLS

Entry to these occupations requires a commercial pilot's license. There are various ways of obtaining a license. One way requires a community college diploma in aeronautics with a concentration in piloting. Another requires successful completion of a training program at a recognized flying club or school. A pilot's license is compulsory, and college graduates receive it automatically. Depending on the specialty, candidates must have the following licenses: commercial pilot license, multi-engine aircraft rating, current Class 1 flight instrument rating, Canadian radio-telephone restricted certificate, air pilot license. Small companies usually require only the minimum licenses specified by the Ministère du transport. Candidates must undergo a medical examination and take a sight test. On-the-job training is necessary. Pilots must retrain when they wish to fly a different type of aircraft. Pilots usually start as co-pilots for the smaller aviation companies and gradually progress toward aircraft captain's positions in the larger companies. Air pilots are being increasingly trained by means of computer-aided simulation techniques. Bilingualism is an asset.

6. SALARY

According to the 1986 census, the average salary of air pilots, navigators and flight engineers was $57,110.

AIR TRANSPORT OPERATING SUPPORT OCCUPATIONS

9113

Examples: Ramp Agent, Air-Traffic Controller, Air-Traffic Co-ordinator, Airline-Radio Operator

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
810	730	-80	95	15

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
40	-	-	-	40

OTHER IMPORTANT REQUIREMENTS

Computer control of air traffic has had an impact on the tasks of these workers.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	8.6	12.0	Under 25 years	-	-	Full-time	-	96.2
Males	91.4	88.0	Over 54 years	-	-	Part-time	-	3.8

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation (85)
- Air Transport (52)
- Serv. Inc. to Air Transport (31)
- Misc. Serv. Incidental to Transport (2)

Wholesale Trade (2)
- Petroleum Prod. (2)

Gov't Service (5)
- Other Federal Service (1)

Transportation Equip. Ind. (3)
- Small Electrical Appliances (3)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a below-average rate. Jobs will be created mainly through attrition of the present labour force. Employment in these occupations is very sensitive to the economic climate and to changes made to transportation policies and regulations, particularly air transport. Computerized air-traffic control has had an impact on the demand for air-traffic controllers and their tasks. With the new technologies, the capacity for control has improved vastly. At present, flight plans are prepared partly by assistant controllers, but these tasks should all be computerized soon. Two controllers are needed for each air zone visible on radar, one to talk to the pilot and another to co-ordinate the airplane's flight. The gradual implementation of radio-text technology could eliminate verbal communication between the pilot, the co-pilot and the controllers since all necessary information will be communicated automatically from the control tower to the aircraft. Automation of landing operations with the micro-wave landing system (MLS) could cause the number of landings to increase by

4. LABOUR MARKET TRENDS (cont'd)

decreasing air waiting time. The trend toward computerizing all the routine air control monitoring tasks could increase safety by ensuring ongoing monitoring. The computerization of data-gathering centres could accelerate the information distribution to the control towers. The introduction of these new technologies should be gradual, particularly since some of them are not yet at the implementation stage. In the long term, they could affect the tasks of air support personnel. Air-traffic controllers must be mobile since they are subject to inter-regional transfers. A normal career path for an air-traffic controller consists in going from less important towers to more complex units.

5. EDUCATION AND SKILLS

Entry to the occupation of air-traffic controller is made easier with a community college diploma in air-traffic control. Possession of a permit issued by Transport Canada is necessary. Air-traffic controllers receive their certificate from an airline. Bilingualism is required. The Training Institute of Transport Canada administers a program for controllers and flight services specialists. Candidates must undergo a medical examination of their sight and hearing each year.

6. SALARY

According to the 1986 census, the average salary of air transport support personnel working full time was $33,255.

LOCOMOTIVE ENGINEERS AND FIREMEN

9131

Examples: Locomotive Engineer, Industrial Locomotive Operator, Diesel Locomotive Engineer, Yard Engineer, Outside Hostler

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,375	1,285	-90	325	235

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
30	-	-	-	30

OTHER IMPORTANT REQUIREMENTS

The general employment cutback policy of railway companies may limit job opportunities in these occupations.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	1.8	2.4	Under 25 years	11.1	-	Full-time	98.8	99.1
Males	98.2	97.6	Over 54 years	19.8	-	Part-time	1.2	0.9

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation (85)
- Railway Transport (83)
- Urban Transit Systems (2)

Mines (5)
- Iron Mines (5)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a below-average rate. Jobs will be created mainly through attrition of the present labour force. Most locomotive mechanics and engineers work in the rail transport sector and employment prospects in these occupations depend on the outlook in this sector. Most railway companies have adopted a general cutback policy applying to all jobs in all departments which should affect both locomotive mechanics and engineers. This policy is a result of decreased traffic and competition from other modes of transportation. The new technologies have also had an impact on the demand for locomotive engineers. Among the technological advances are intermodal transport services, computerized reading systems for distances and switching operations as well as electronic inspection and diagnostic devices in the engineer's cabin.

5. EDUCATION AND SKILLS

Entry to these occupations requires a secondary school diploma. Before undertaking training as a locomotive engineer, candidates are required to have 28 to 36 months of job experience as a trainmen/women, brakemen/women, switchman/woman, or assistant diesel motor mechanic. Candidates must complete an eight-week program of studies at the Gimley training center in Manitoba. On-the-job training is then required.

6. SALARY

According to the 1986 census, the average salary of locomotive engineers working full time was $34,037.

DECK OFFICERS

9151

Examples: Ship's Captain, Marine Pilot, Deck Officer, Tugboat Operator

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
955	870	-85	245	160

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
165	-	65	-	230

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%) :

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	2.4	2.2	Under 25 years	8.9	-	Full-time	97.6	100.0
Males	97.6	97.8	Over 54 years	16.9	-	Part-time	2.4	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation (72)
- Water Transport (45)
- Serv. Inc. to Water Trans. (23)
- Other Transport (4)

Construction Ind. (3)
- Other Construction (3)

Gov't Service (6)
- Other Federal Service (4)
- Provincial Service (2)

Fin., Ins. & Real Estate ((2)
- Insurance Carriers (2)

Education (5)
- Educ. & Rel. Serv., n.e.c. (5)

Misc. Services (2)
- Labour Org. & Trade Ass. (2)

4. LABOUR MARKET TRENDS

Employment is expected to decrease in this occupational group. Job openings will result mainly from attrition of the present labour force. Since these occupations are concentrated mainly in the water transport sector, the level of employment varies with market fluctuations. Seasonal factors are also important; the number of job opportunities peaks during summer and fall. Job openings are limited geographically to the Great Lakes, Canadian coastal areas and the St Lawrence Seaway. Within the offshore marine industry, however, turnover rates are low as qualified deck officers are reluctant to change their careers. In general there are few openings at the rank of third mate, but there is a demand for candidates at a higher rank. Knowledge of marine charts, piloting, navigation, meteorology, ship management, naval construction, ship mechanics as well as handling work is essential. Knowledge of first aid is required. Mobility is essential since workers in this group must travel for long periods of time. Work hours are long and irregular.

5. EDUCATION AND SKILLS

The minimum requirement for entry to these occupation is completion of secondary school. Deck officers must have at least a watchkeeper's certificate which may be obtained by completing a three-year cadet program offered by an accredited navigation school or with a minimum of 24 months of experience as member of a deck team. Aspiring deck officers must then pass the examination set by Transport Canada, which leads to a watchkeeper's certificate. A community college diploma is required to obtain remission of sea time from the Department of Transport. A college diploma in marine technology is an asset. Graduates are eligible for a second mate's certificate and may obtain some credits toward being eligible to write the captain's examination. Certification is compulsory, and ship's commanders are certified according to type of vessel and waters they sail in. For ferry boat deck officers, minimum accreditation consists of the ferryboat and steamboat first mate's certificate.

6. SALARY

According to the 1986 census, the average salary of deck officers working full time was $41,434.

ENGINEERS OFFICERS, SHIP

9153

Examples: Chief Marine Engineer, Diesel Engineer Officer, Engineer Officer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
625	650	25	105	130

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
100	-	-	-	100

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	0.0	4.6	Under 25 years	14.0	-	Full-time	97.1	100.0
Males	100.0	95.4	Over 54 years	19.6	-	Part-time	2.9	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation (68)
- Water Transport (44)
- Serv. Inc. to Water Trans. (22)
- Other Truck Transport (2)

Transportation Equipment Ind. (11)
- Shipbuilding and Repair (9)
- Boatbuilding and Repair (2)

Business Services (4)
- Eng. and Scient. Services (2)
- Mgmt. Consulting Off. (2)

Gov't Service (4)
- Other Federal Service (2)
- Provincial Service (2)

Misc. Services (3)
- Misc. Repair Shops (3)

Machinery Industries (2)
- Misc. Machinery and Equip. (2)

4. LABOUR MARKET TRENDS

Employment in this occupational group is expected to remain relatively stable. Jobs are concentrated mainly in the water transport sector, and are therefore very sensitive to market fluctuations. Though technological changes facilitate the tasks of ship mechanics, they appear to have little effect on the level of employment. The constant improvement in reliability and performance of semiconductor navigational equipment will continue to limit navigational systems and material maintenance operations and reduce the number of necessary routine checks. Knowledge of thermodynamics, electrotechnology, naval stability and construction, naval mechanics principles, internal combustion marine vessels and steam vessels is essential.

5. EDUCATIONAL AND SKILLS

There are number of ways to enter these occupations: a college diploma in marine technology with a concentration in marine mechanics, or approximately four years' experience as a machinist in a firm specializing in ship engines, or three or four years' experience as a machine operator (oiler and greaser, assistant fireman-engineer or engineer on a ship, or a watch engineer on a Canadian Forces vessel). Certification by the Canadian Coast Guard is compulsory. There are four classes of certificates. The new safety standards adopted by the industry require additional training. Technical training at the École de technologie supérieure provides entry to jobs on land.

6. SALARY

According to the 1986 census, the average salary of ship engineering officers working full time was $37,741.

BUS DRIVERS

9171

Examples: School Bus Driver, Bus Driver

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
12,750	12,330	-420	3,085	2,665

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
1,715	-	-	-	1,715

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	16.0	16.1	Under 25 years	5.6	-	Full-time	97.0	95.7
Males	84.0	83.9	Over 54 years	16.7	-	Part-time	3.0	4.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation (92)
- Interurban and Rural (7)
- Urban Transit Systems (7)
- Other Transportation (48)

Education (3)
- Elem. and Sec. Schools (3)

Gov't Service (1)
- Local Gov't Service (1)

4. LABOUR MARKET TRENDS

This occupational group is expected to lose jobs. However, the openings created through attrition of the present labour force should offset the loss of employment. Employment in this group is highly concentrated in the transportation sector, and is thus sensitive to factors affecting this sector. The demand for bus drivers is related to the number of passengers and government budget constraints. However, the demand for long-distance, inter-city bus transport is relatively insensitive to swings in the economy, resulting in steady demand for bus drivers of this type. Technical advances have had few significant effects on these occupations, as bus drivers cannot be replaced with machines. The growing demand for chartered transportation will continue to have an impact on employment, particularly for school bus drivers who often work on a part-time basis. Beginners work shifts and are often required to work broken shifts.

5. EDUCATION AND SKILLS

There is no particular educational requirement for this occupation. Successful completion of a defensive driving course in an asset. A Class 11 driver's license issued by the Quebec Automobile Insurance Board is required. Two weeks of on-the-job training under the supervision of an experienced operator is required.

6. SALARY

According to the 1986 census, the average salary of bus drivers working full time was $26,685.

TRUCK DRIVERS

9175

Examples: Armoured Car Driver, Automobile Transport Driver, Oil Truck Driver, Milk Hauler, Delivery Driver

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
63,230	63,755	525	8,455	8,980

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
10,580	930	45	-	11, 555

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	1.0	1.4	Under 25 years	19.4	-	Full-time	96.4	95.3
Males	99.0	98.6	Over 54 years	8.1	-	Part-time	3.6	4.7

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation (33)
- Moving and Storage (1)
- Other Truck Transport (30)
- Highway & Bridge Maint. (2)

Construction Industry (4)
- Highway, Bridge Constr. (1)
- Special-trade Contractors (3)

Food and Beverage Ind. (3)
- Beverage Ind. (3)

Non-metallic Mineral Prod. Ind. (1)
- Ready-Mix Concrete Man. (1)

Wholesale Trade (9)
- Petroleum Products (2)
- Food (3)
- Lumber and Building Mat. (3)
- Wholesalers, n.e.c. (1)

Accommodation and Food Serv. (3)
- Restaurants (3)

Forestry (1)
- Logging (1)

Retail Trade (5)
- Food (3)
- Furniture (2)

Gov't Service (3)
- Local Gov't Service (3)

Wood Industries (1)
- Sawmills (1)

4. LABOUR MARKET TRENDS

Employment in this occupational group is expected to remain relatively stable. Job openings will result mainly from attrition of the present labour force. With ongoing deregulation in the road transport sector, trucking companies may face stronger competition from American trucking companies and other modes of transport such as the railways. Deregulation of transportation appears to have slowed down the growth of the trucking industry over the last decade. The wave of transport company mergers and the disappearance of the smaller companies may continue, but at a slower rate than that experienced in recent years. Deregulation of road transport has brought about market changes. Road transport companies are increasingly specializing in the transportation of specific products, for instance, pharmaceutical products, bulk products, newspapers, etc. Specialization is becoming an

4. LABOUR MARKET TRENDS (cont'd)

asset from a competitive standpoint and could have an impact on the skills required of truck drivers as well as check the current mobility of drivers between different types of carriers.

Technological changes mainly involve improvements to existing equipment. The use of extended trailers and road trains, which consist of two or three trailers attached one behind the other, is gradually gaining ground. The appearance of these new technologies has not yet had an effect on the number of truck drivers, who depend for the most part on the demand for transportation. Though not widely used at present, the tachometer may, in the long term, replace the road log which is now part of truck drivers' tasks. The introduction of dashboard electronics, though little used at the present time, may increase the number of management tasks that truck drivers must carry out. This equipment ranges from the road log recorder to the computer with keyboard, screen and printer. Since some truck drivers may be required to send and receive messages, they will have to be familiar with microcomputers.

The labour supply should exceed the expected demand. However, shortages of qualified, competent truck drivers could occur in some of the industry's subsectors. In Canada, most truck drivers work for carrier companies rather than being self-employed. Self-employed truck drivers who own their vehicle are the most difficult for companies to recruit. There are shortages of qualified truck drivers since the driving skills sought by employers often exceed the qualifications required for a Class A driver's license. Because of the increased importance placed on road safety, including vehicle inspection and handling of hazardous materials, knowledge of health and safety guidelines is an asset for aspiring truck drivers. Regulations concerning road safety will increase the quantity and complexity of the forms that have to be completed by truck drivers. Because of the competitive nature of transportation services, companies are looking for truck drivers who are capable of maintaining a good rapport with their clients.

5. EDUCATION AND SKILLS

To become truck drivers candidates must be at least 18 years of age and have a valid driver's license. Entry to the occupation of heavy truck driver requires a minimum of ten years' schooling. Successful completion of a defensive driving course or trucker training program is an asset. A Class 21 or 22 driver's license is required. A novice trucker often drives a van before going on to larger vehicles. Van drivers must have nine years' schooling and a Class 41 or 42 driver's license. One means of entering the occupation is to begin as a loader or driver helper.

6. SALARY

According to the 1986 census, the average salary of truck drivers working full time was $22,931. The salary scale varies for truckers. In general, drivers of articulated vehicles earned more than drivers of single trucks, drivers with more seniority and drivers of special vehicles. The type of itinerary also affects income.

TYPESETTING AND COMPOSING OCCUPATIONS

9511

Examples: Typesetter (Printing and Publishing), Compositor, Typesetter (Photocomposition), Linotype Operator, Scanner Reader Machine Operator, Computer-Assisted Compositor

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
2,260	1,680	-580	380	-200

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
180	140	40	-	360

OTHER IMPORTANT REQUIREMENTS

The traditional occupation of typographer has almost disappeared.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	-	44.1	Under 25 years	-	-	Full-time	-	94.4
Males	-	55.9	Over 54 years	-	-	Part-time	-	5.6

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Printing, Publishing and Allied Industries (82)
- Commercial Printing (33)
- Platemaking, Typesetting and Trade Bindery Industry (22)
- Publishing (4)
- Printing and Publishing (23)

Business Services (5)
- Advertising Services (5)

4. LABOUR MARKET TRENDS

Forecasts indicate that employment for this occupational group will drop substantially. Job openings will essentially be created through attrition of the present labour force and are not expected to offset the expected loss of jobs. The decline in employment opportunities for typographers is not a recent phenomenon and is mainly linked to the new advanced technologies being used in the printing industry. The traditional occupation of typographer has almost disappeared with the advent of offset printing. New typographic tasks require a knowledge of computers. Microcomputer technology has made in-house desktop publishing possible. This new technology allows companies to create communications documents, forms, business cards, etc., without recourse to an outside service. Electronic printing means that a document no longer needs to be sent out for photocomposition, graphics or page make-up. Page make-up software makes it possible to produce a final product, and laser printers are used for small printing jobs. New printing markets are opening up, particularly in the area of business communications

4. LABOUR MARKET TRENDS (cont'd)

for internal use, instruction and user's manuals, news bulletins and mailing and telephone lists. Most of the work done through desktop publishing is opening up new markets since this work was not necessarily being done by printing companies, mainly because of the high costs involved. These new markets may increase the job prospects for those with a basic knowledge of typography. Though this type of printing does not call for the skills of a typographer as such, it does require a knowledge of typography and photocomposition. Candidates with this basic knowledge as well as a working knowledge of microcomputers have a valuable advantage for jobs in these new areas of printing.

5. EDUCATION AND SKILLS

Entry to this occupation requires a community college diploma in typography-composition. A five-year apprenticeship is mandatory. A secondary level course in photocomposition may also be acceptable.

6. SALARY

According to the 1986 census, the average salary of typographers working full time was $24,858.

PRINTING PRESS OCCUPATIONS 9512

Examples: Press Operator, Offset Press Operator, Platen Press Operator, Flexographic Press Operator

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1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
7,925	8,475	550	985	1,535

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
630	605	90	0	1,325

OTHER IMPORTANT REQUIREMENTS

Increasingly specific qualifications are in demand.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	9.4	10.1	Under 25 year	28.6	-	Full-time	98.2	96.6
Males	90.6	89.9	Over 54 years	5.9	-	Part-time	1.8	3.4

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Printing and Publishing (77)
- Commercial Printing (67)
- Platemaking, Typesetting and Trade Bindery (2)
- Printing and Publishing (8)

Education (5)
- Elem. and Sec. Schools (3)
- Postsecondary Education (1)
- Universities and Colleges (1)

Paper Industry (3)
- Paper Boxes and Bags (2)
- Misc. Paper Converters (1)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a below-average rate. About 1,500 press operators are needed to fill new jobs and to fill existing jobs vacated through attrition. Job prospects in this occupational group depend on the outlook in the printing and publishing sectors. Employment trends will differ within printing press occupations. Moderate growth is expected for lithographic press operators as offset lithography is now the main process used in the commercial printing industry. The growth of flexographic printing used in the production of flexible packaging and for imprinting is expected to be moderate. But as the process continues to be refined it could become more competitive with lithography. Employment growth in lithography may therefore be limited. Copper-plate or rotogravure printing is expected to grow. The relative stability of employment depends on the constant demand for printed matter. Competition from the electronic media has not slowed down the increase in the demand for printed media, particularly specialized magazines.

4. LABOUR MARKET TRENDS (cont'd)

Other factors will have a positive effect on the level of printing activity, i.e. the growing importance of products linked to advertising in commercial printing, the creation of new products through holography and four-colour process printing and the spread of direct mail. Computer technology has also given rise to new needs with regard to publications, magazines and books for users of personal computers. All of these considerations may widen the printing market and create new job openings for press operators. However, certain factors, such as the possible levelling off of the demand for specialized magazines, the emergence of desktop publishing which could absorb part of the printing market and the transmission and storage of information via electronic means could limit the growth of the printing market and the demand for press operators. Technological change will gradually alter the role of the press operator. The computerization of presses has reduced the time/work required for press start-up, control and adjustment of coloured inks. The use of colour presses with electronic components, the ability to differentiate colours and a knowledge of electronics are essential for press operators. The ability to read English-language press operation manuals and the ability to transmit this information to others are in demand, all the more so since press operators are required to supervise the personnel working for them. Increasingly specific qualifications are required of press operators. Candidates with a knowledge of advanced technologies are very much in demand. The implementation of computer-controlled presses and the use of high-speed rotary presses means that candidates must be able to make quick decisions about adjustments that will improve production quality. Since the press operator trade is based on a hierarchy, employees must graduate through several levels before becoming head press operator. The trend in Quebec companies is to hire a labourer or "floor person" who will become assistant press operator and then press operator. In general, from six to ten years of practical experience are required to become a press operator.

5. EDUCATION AND SKILLS

Entry to this occupation requires either a community college diploma in printing or in offset and automatic platen printing or a secondary vocational course. A five-year apprenticeship is mandatory. Practical experience is more important than a diploma.

6. SALARY

According to the 1986 census, the average salary of printing press operators working full time was $24,922.

PHOTOENGRAVING AND RELATED OCCUPATIONS

9515

Examples: Laser Beam Colour Scanner Operator, Stripper, Electrostatic Camera Operator, Print Transferer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
935	1,010	75	150	225

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
110	145	35	0	290

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986
Females	13.4	16.6
Males	86.6	83.4

AGE	1981	1986
Under 25 years	17.2	-
Over 54 years	7.0	-

STATUS	1981	1986
Full-time	95.5	100.0
Part-time	4.5	0.0

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Printing and Publishing (87)
- Commercial Printing (53)
- Platemaking, Typesetting and Trade Bindery (19)
- Publishing Only (4)
- Printing and Publishing (11)

Business Services (4)
- Advertising Services (3)
- Misc. Business Services (1)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a below-average rate. About 225 jobs will open up during the forecast period, two-thirds of which will be created through attrition. The employment outlook for this occupational group will depend on the outlook in the printing and publishing sectors. There has been a shift away from photocomposition in the printing industry. However, preparatory printing tasks involving photoengravers should continue to be required by companies. The continuing shift toward offset printing from letterpress will limit chances for employment of photoengravers specialized in the letterpress process. Technological changes have made it necessary for workers to retrain for certain stages of the photoengraving process. The application of laser technology could provide opportunities for photoengravers, though the operation of some very advanced equipment, such as the laser beam scanner, requires a cameraperson. A training period with the manufacturer, often outside the country, followed by another training period with the manufacturer's representative in the country, is often required by employers.

4. LABOUR MARKET TRENDS (cont'd)

Moderate employment growth is expected for electronic pre-press technicians who operate computer-controlled devices capable of executing complex stripping and retouching functions in four colours. Photoengravers are often required to work evenings and overtime.

5. EDUCATION AND SKILLS

Entry to this occupation requires either a secondary vocational course in printing, letterpress option, or a community college diploma in graphic communications with a concentration in photolithography. Experience acquired during training is an asset. A five-year apprenticeship is mandatory.

6. SALARY

According to the 1986 census, the average salary of photoengravers and related workers employed full time was $27,389.

POWER STATION OPERATORS

9531

Examples: Diesel Plant Operator, Generation Station Operator, Hydro Operator, Nuclear Reactor Operator

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,105	990	-115	190	75

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
20	-	-	-	20

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	4.3	3.4	Under 25 years	16.7	-	Full-time	100.0	97.7
Males	96.7	96.6	Over 54 years	14.9	-	Part-time	0.0	2.3

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Trans., Comm. & Public Util. (73)
- Telephone Systems (3)
- Electric Power (70)

Paper and Allied Industries (2)
- Pulp and Paper Mills (2)

Construction Industry (6)
- Other Construction (4)
- Special-trade Contractors (2)

Primary Metal Industry (3)
- Smelting and Refining (3)

4. LABOUR MARKET TRENDS

Employment is expected to decrease in this occupational group. Job openings will result mainly from attrition of the present labour force. Employment for generation station operators is concentrated in the electricity production sector, and partly depends on foreign demand for electric power. Strong American demand for this type of energy could maintain job prospects for generation station operators. In the long term, job opportunities could decline if foreign demand for electricity decreases. The wider use of telemetering instruments, automation and centralized equipment could limit job opportunities. A number of jobs such as generator switchboard operator, diesel plant operator, computer operator and power control room operator could be performed by second class stationary engineers. Similarly, monitoring of feeder-circuit switching could be performed by third class stationary engineers. Consequently, competition for station operators could remain very brisk.

5. EDUCATION AND SKILLS

Entry to these occupations usually requires a secondary school diploma including mathematics and physics. Computer courses are an advantage. Station operators must have technical skills and be familiar with safety measures. A community college diploma in pure and applied sciences or in physical technology is an asset for nuclear reactor operators. It takes about ten years of on-the-job training and specialized studies with examinations to become a first class operator.

6. SALARY

According to the 1986 census, the average salary of generation station operators working full time was $41,326.

STATIONARY ENGINE AND UTILITIES EQUIPMENT OPERATING AND RELATED OCCUPATIONS, N.E.C. (PLUS WATER AND SANITATION UTILITIES EQUIPMENT OPERATING OCCUPATIONS (9535))

9539

Examples: Cooling System Operator, Dam Attendant, Incinerator Operator, Purification Plant Operator, Boiler Operator

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
9 115	9,370	255	2,075	2,330

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
495	470	5	-	970

OTHER IMPORTANT REQUIREMENTS

The introduction of technological changes affects the demand for this group.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	2.1	3.0	Under 25 years	16.0	-	Full-time	98.4	97.8
Males	97.8	97.0	Over 54 years	16.4	-	Part-time	1.6	2.2

3. MAINS SECTORS PROVIDING EMPLOYMENT (1986 %)

Electric Power, Gas & Water (10)
- Electric Power (3)
- Water Distribution (5)
- Other Public Util. (2)

Health and Social Services (5)
- Hospitals (5)

Retail Trade (4)
- Gasoline Service Stations (4)

Primary Metal Industry (1)
- Smelting and Refining (1)

Gov't Service (9)
- Defence Services (1)
- Other Federal Service (2)
- Provincial Service (1)
- Local Gov't Service (5)

Construction Industry (4)
- Other Construction (1)
- Special-trade Contractors (3)

Food and Beverage Industry (2)
- Dairy Industry (1)
- Beverages (1)

Petroleum Ind. (1)
- Petroleum Refineries (1)

Paper and Allied Industries (8)
- Pulp and Paper Mills (8)

Wood Industry (4)
- Sawmills (3)
- Misc. Wood Ind. (1)

Textile Industries (2)
- Cotton Yarn and Cloth Mills (1)
- Misc. Textile Ind. (1)

4. LABOUR MARKET TRENDS

Employment in this occupational group is expected to remain relatively stable. Most of the job openings will result from attrition of the present labour force. The demand for mechanics' services is affected by the

STATIONARY ENGINE AND UTILITIES EQUIPMENT OPERATING AND RELATED OCCUPATIONS, N.E.C. (PLUS WATER AND SANITATION UTILITIES EQUIPMENT OPERATING OCCUPATIONS (9535))

9539

4. LABOUR MARKET TRENDS (cont'd)

introduction of technological changes. The growing use of central control panels and closed-circuit television reduces the need for tending the equipment directly. Automatic control systems, valve regulators and other devices are replacing manual controls. Stationary machines, water and waste treatment equipment and pumping and pipeline equipment are increasingly being operated from a central control panel. All of these technological improvements limit job opportunities in this group. However, the work of stationary machine mechanics is becoming more complex. Knowledge in electricity and instrumentation is necessary, in addition to a knowledge of mechanical engineering. Since 1978, the Quebec government's water purification program has stimulated employment for water and sanitation equipment operators. However, recent restrictions on these projects that could stop the construction of new plants may considerably limit job opportunities in this sector. There are several water treatment operating techniques. Of these, the aerated pond technique is the most widely used. In this type of plant, workers have other responsibilities in addition to the specialized tasks required to operate the plant. In physical-chemical plants, tasks are more specialized.

5. EDUCATION AND SKILLS

Many of these workers have a post-secondary degree. They must undertake on-the-job training and pass a written examination to obtain a fourth-class certificate. To obtain third-, second- and first-class certificates, more advanced on-the-job training and additional examinations are necessary. Candidates may enter water treatment plant operator's positions with a secondary school diploma. The Paul-Gérin Lajoie secondary school in Vaudreuil offers specialized training in this field. A community college diploma in water purification also provides a means of entry to these occupations.

6. SALARY

According to the 1986 census, the average salary of stationary engine and utilities equipment mechanics and related workers employed full time was $27,825.

RADIO AND TELEVISION BROADCASTING EQUIPMENT OPERATORS

9551

Examples: Studio Control Operator, Switcher, Radio and Television Operator, Sound Person

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,385	1,445	65	155	220

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
20	0	35	0	55

OTHER IMPORTANT REQUIREMENTS

These occupations will be affected by budget cuts and new technologies.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	19.7	7.6	Under 25 years	31.1	-	Full-time	95.2	97.9
Males	80.3	92.4	Over 54 years	37.9	-	Part-time	4.8	2.1

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Transportation, Communication, and Other Utilities (69)
- Radio and Television Broadcasting (50)
- Telephone Systems (15)
- Telegraph and Cable Systems (2)
- Electric Power (2)

Amusement & Recreation Serv. (2)
- Film Production and Distribution (2)

Gov't Service (11)
- Defence Services (4)
- Other Federal Service (4)
- Provincial Service (2)
- Local Gov't Service (1)

Business Services (2)
- Computer Services (2)

Electrical Prod. Ind. (6)
- Radio and Television Receivers (1)
- Communications Equip. (4)
- Electric Wire and Cable (1)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a rate well below the average. The employment outlook for these operators is dim owing to increased budget cuts. With respect to television broadcasting, switching operations are tending to become automated and computerized. The operator's role is shifting toward the supervision of the video cassette production and supply process. The automation of production activities could result in decreased demand for personnel assigned to these tasks. The introduction of new equipment, such as cameras and videos and video cassette recorders has changed the nature of sound and picture recording and editing and could diminish the demand for sound persons. As several generations of camera equipment are being used simultaneously in television studios, a knowledge of new camera techniques in addition to the more traditional ones is a definite asset for operators.

4. LABOUR MARKET TRENDS (cont'd)

With respect to radio broadcasting, technological changes should facilitate the tasks of control operators, who will remain in charge of switching tasks which are only partially supported by the new technologies. As program broadcasting at certain times of the day becomes more automated, job opportunities for these operators could diminish, especially for night broadcasting. New technologies have many different consequences on employment. Teledistribution techniques and the use of video cassette recorders and videocassette players will help to create a certain amount of jobs, while increased automation could eliminate other jobs.

5. EDUCATION AND SKILLS

A community college diploma with a concentration in electronics is an asset to transmitting technicians and master control operators, while a concentration in audio-visual equipment helps switchers and picture controllers.

6. SALARY

The salaries of these professionals are negotiated collectively by the National Association of Broadcasting Employees and Technicians (NABET), which represents about 4,950 employees and freelancers in Canada. The hourly rates earned by freelance technicians and operators in January 1986 are as follows: postproduction mixing technicians, $24.50; assistant sound/boom technicians, $20.50; sound editors (headlines), $24.50; switchers, $20.50; video control operators, $20.50; videotape editors (production), $22.50; and telecine operators, $19.50.

According to the 1986 census, the average salary of radio and television broadcasting equipment operators working full time was $32,474.

SOUND AND VIDEO RECORDING AND REPRODUCTION EQUIPMENT OPERATORS

9555

Examples: Sound Editor, Studio Technician, Dubbing Machine Operator, Sound-effects Engineer, Recording Engineer

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
770	940	170	75	245

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000			TOTAL LABOUR SUPPLY 1989-2000
	SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	
85	0	105	0	190

OTHER IMPORTANT REQUIREMENTS

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	AGE	1981	1986	STATUS	1981	1986
Females	9.2	13.4	Under 25 years	23.6	-	Full-time	97.3	96.8
Males	90.8	86.6	Over 54 years	5.2	-	Part-time	2.7	3.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Communications (36)
- Radio and Television Broadcasting (35)
- Telephone Systems (1)

Gov't Service (7)
- Other Federal Service (3)
- Provincial Service (3)
- Local Gov't Service (1)

Amusement and Recreation Serv. (33)
- Movie Theatres (3)
- Film Prod. and Distr. (24)
- Theatrical Services (5)
- Misc. Services (1)

Education (7)
- Elem. and Sec. Schools (3)
- Universities and Colleges (1)
- Libraries and Museums (1)

4. LABOUR MARKET TRENDS

Employment is expected to grow at a rate slightly above the average. However, very few jobs will be created (about 245). The trend toward greater automation could have an adverse effect on employment growth. The widespread use of video cameras which capture images and sound simultaneously could slow down the demand for sound technicians. In computer-assisted imaging, it is the machine that duplicates the images and sound, with the operator providing the editing parameters. Thus, the requirement for editors could diminish. The advent of stereophonics has changed the type of equipment being used. In the medium term, this mode of broadcasting should not affect employment opportunities for operators of this type of equipment since the conversion to stereophonics is expected to take place gradually because of the costs involved.

5. EDUCATION AND SKILLS

Entry into these occupations generally requires a community college diploma in electronics with a concentration in audio-visual equipment. For sound and video recording engineers, a diploma in communications with a concentration in media arts and technology is an asset.

6. SALARY

The salaries of these professionals are negotiated collectively by the National Association of Broadcasting Employees and Technicians (NABET), which represents about 4,950 employees and freelances in Canada. The hourly rates earned by freelance technicians and operators in January 1986 are as follows: postproduction mixing technicians, $24.50; assistant sound/boom technicians, $20.50; sound editors (headlines), $24.50; switchers, $20.50; video control operators, $20.50; videotape editors (production), $22.50; and telecine operators, $19.50.

According to the 1986 census, the average salary of employees working full time was $28,717.

PHOTOGRAPHY LABORATORY WORKERS

9591

Examples: Photo Enlarger, Negative Cutter, Photo Finisher, Film Cutter, Photo Lab Worker

1. LABOUR MARKET FROM 1989 TO 2000

JOB OPENINGS

NEW JOB OPENINGS			JOB OPENINGS DUE TO	TOTAL JOB OPENINGS
JOBS 1989	JOBS 2000	CHANGES 1989-2000	ATTRITION 1989-2000	1989-2000
1,595	1,390	-205	255	50

LABOUR SUPPLY

ESTIMATED UNEMPL. 1989	GRADUATES 1989-2000 SECONDARY	COMMUNITY COLLEGE	UNIVERSITY	TOTAL LABOUR SUPPLY 1989-2000
120	400	125	0	645

OTHER IMPORTANT REQUIREMENTS

New technologies have caused the labour market to shrink somewhat.

2. MAIN CHARACTERISTICS (%)

SEX	1981	1986	ÂGE	1981	1986	STATUS	1981	1986
Females	48.2	46.2	Under 25 years	-	-	Full-time	-	91.8
Males	51.8	53.8	Over 54 years	-	-	Part-time	-	8.2

3. MAIN SECTORS PROVIDING EMPLOYMENT (1986 %)

Misc. Services (35)
- Photography, n.e.c. (35)

Amusement & Recreation Serv. (5)
- Film Prod. and Distr. (5)

Printing and Publishing (27)
- Printing (6)
- Plate-making, Typesetting and Trade Bindery (20)
- Publishing and Printing (1)

- Business Services (3)
- Advertising Services (2)
- Misc. Services (1)

Retail Trade (12)
- Book & Stationery Stores (1)
- Retailers, n.e.c. (11)

4. LABOUR MARKET TRENDS

Employment for photo lab workers is expected to show a negative growth rate. The increase of fast photo developing services has resulted in a restructuring of amateur photography as an activity based on service. The labour market trend is toward photo finishing services using fast developing machines situated on the same premises as film sales outlets. The expansion of photo labs has occurred through increased production capacity and the conquest of new markets with the rise of fast developing services. With the introduction of automatic film development machines, stores no longer need laboratory services. Automatic development and mass printing of photographs should reduce demand for photo lab workers. The tasks of operators at the development stage involve various film handling tasks, such as guiding and feeding films into and adjusting the developing machine and sample quality control. With multi-copy printers which print several sizes of photographs from a single negative, the number of operators is tending to decline. Moreover, these processes should eliminate the manual video which is still being used for professional production. Printing tasks are reduced to the feeding

4. LABOUR MARKET TRENDS (cont'd)

of films into machines and guiding film and paper toward the photo processor. Film-cutting tasks are becoming increasingly automated and are tending to reduce the volume of employment for these workers.

The labour market for photo lab workers has contracted under the impact of technological changes which have brought about a decrease in the labour force and in the qualifications required in the amateur photo developing sector. The trend toward modernization of professional laboratories should continue as a result of increasing competition from the amateur sector. In specialized photo labs, highly qualified and experienced employees are sought. Knowledge of new laser technologies is an asset.

5. EDUCATION AND SKILLS

There are two ways of gaining the training needed to enter this occupational group: the traditional method is on-the-job training and the other consists of taking a program in photography or photo-mechanics in a CEGEP or technological institute.

6. SALARY

According to the 1986 census, the average salary of photo lab workers employed full time was $18,777.

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